# INSTALLING & OPERATING YOUR MARCO WOOD-BURNING FIREPLACE

MARCO®

## ARCHITECT'S 41" MASONRY FIREPLACES

Patents Pending

| STOCK # | MODEL REFERENCE | DESCRIPTION |
|---|---|---|
| 792870 | A41MTR | ARCHITECT'S 41" MASONRY "TRADITIONAL" |
| 792871 | A41MTU | ARCHITECT'S 41" MASONRY "TUDOR" |
| 792872 | A41MC | ARCHITECT'S 41" MASONRY "CUSTOM" |

**CHECK LOCAL CODES PRIOR TO INSTALLATION**

**OPTIONAL FEATURES:** GLASS DOORS
OUTSIDE AIR KIT

THIS MANUAL PROVIDES ALL THE INSTRUCTIONS NECESSARY FOR THE BUILDER OR HOMEOWNER TO INSTALL THE ARCHITECT'S 41" MASONRY FIREPLACES SAFELY AND EFFICIENTLY. IT ALSO PROVIDES INFORMATION ON HOW TO ORDER REPAIR PARTS WHEN NEEDED.

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THIS SYMBOL ON THE PRODUCT MEANS IT IS LISTED BY UNDERWRITER'S LABORATORIES, INC.

MARCO MFG., INC., 2520 Industry Way, Lynwood, CA 90262 (213)564-3201

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## SAVE THIS BOOK

**This book is valuable. In addition to telling you how to install and maintain your fireplace and chimney, it also contains the information that will enable you to obtain repair parts when needed. Keep it with your other important papers.**

# KEEP YOUR FIREPLACE SAFE

NEVER USE GASOLINE, GASOLINE-TYPE LANTERN FUEL, CHARCOAL LIGHTER FLUID OR SIMILAR LIQUIDS TO START OR "FRESHEN-UP" A FIRE IN THE FIREPLACE. KEEP ALL SUCH LIQUIDS WELL AWAY FROM THE FIREPLACE.

# I. ACCESSORIES

## FIREPLACE GRATE:

This unit has been equipped with a grate designed to keep the operation of your fireplace efficient and safe. See Page 17 for operating instructions.

## GLASS DOORS:

Bi-fold glass doors can be installed as an optional accessory. Use MARCO door kit #793420 or #793421 and refer to the installation instructions in that kit for installation details. The glass doors can be installed before, during or after the installation of the fireplace.

**THE GLASS DOOR MOUNTS OVER THE FACING MATERIAL. TO ENSURE PROPER OPERATION, FACING MUST NOT PROTRUDE INTO THE FIREPLACE OPENING.**

**NOTE: Use of glass doors other than those manufactured by Marco Mfg., Inc. could create a potentially hazardous condition and will void the MARCO warranty.**

## OUTSIDE AIR:

An optional outside air kit is available for installation. An outside air kit must be installed during the installation of the fireplace (See pages 4 & 5).

The outside air damper mechanism is an integral part of the unit.

To complete the outside air kit you must purchase air inlet eyebrow #793255 and 4" diameter Class 0 or Class 1 flex duct (purchased locally).

# II. INSTALLATION INSTRUCTIONS

## INTRODUCTION:

- Before beginning the installation of your fireplace, read through these instructions and the instructions contained in the separate Operation Manual.
- This MARCO fireplace and components are safe when installed according to this Installation Manual. Unless you use MARCO components which have been designed and tested for the fireplace system, you may cause a fire hazard.
- MARCO 41" Masonry fireplaces may be installed in a conventional home or a prefabricated home.
- The MARCO warranty will be voided by, and MARCO disclaims any responsibility for, the following actions:

  a) Modification of the fireplace and/or components, including assembly of chimney, glass doors, air inlet system and damper control.

  b) Use of any component part not manufactured or approved by MARCO in combination with a MARCO fireplace system.

  c) Installation other than as instructed in this manual.

**DO NOT USE A FIREPLACE INSERT OR OTHER PRODUCTS NOT SPECIFIED FOR USE WITH THESE FIREPLACES.**

- PROPER INSTALLATION is the most important step in ensuring safe, long-term operation of this fireplace. Consult the local building codes as to the particular requirements concerning installation of all factory-built fireplaces.

# SELECTING YOUR FIREPLACE LOCATION

To determine the safest and most efficient location for your fireplace, consider such factors as room traffic, location of doors and windows, and construction above and below the installation area. The fireplace may be installed in any location that is free of air conditioning ducts, electrical wiring, and plumbing. This location must also provide the necessary clearances.

## LOCATION

Corners should be considered where space is limited or at a premium. A corner-installed fireplace can make use of space that may not normally be used (see Figure 1).

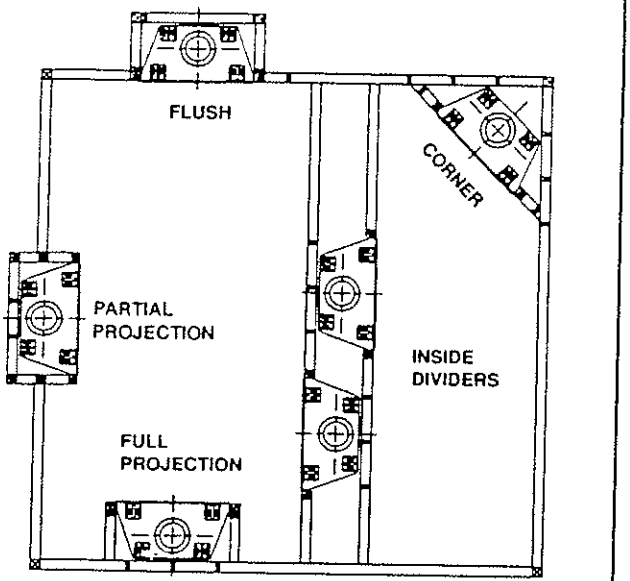



FIGURE 1
LOCATION AND INSTALLATION

- A fireplace may be installed flush with the finished wall or projecting any distance into the room. Flush installation is recommended for smooth or thin wall-facing materials. By installing the fireplace to project into the room, a shallower cavity is required to contain the fireplace; thicker natural materials, such as field stone, can then be used for face material .

- A location that requires cutting the least number of joists, roof rafters, and floor joists will reduce costs and make installation easier. This may mean moving only one or two inches from the selected ideal location. Any location selected must allow adequate room to accommodate the fireplace and framing dimensions shown in Figures 4, 5 & 6.

SEE FIGURE 1 FOR LOCATION EXAMPLES. WHATEVER LOCATION IS CHOSEN, ACCESSIBILITY TO OUTSIDE COMBUSTION AIR SHOULD BE CONSIDERED. (SEE PAGE 5).

- Do not place the fireplace on soft-surfaced floor covering such as carpeting. The mounting surface must be flat and hard (such as plywood, wood flooring, particle board or any other hard-surfaced material), and evenly support the total base of the fireplace. A raised platform may be used to support the fireplaces.

- When a fireplace is installed on a combustible floor, a non-combustible hearth extension must be provided to protect the floor in front of the opening. (Refer to Hearth Extension, Pages 15 & 16).

## CLEARANCES

- A fireplace must not be installed closer than 20 inches to any unprotected combustible wall perpendicular to the door opening (Figure 3).

- When a 24" W x 36" H wall shield made from a non-combustible inorganic material with thermal conductivity K of .54 or less is used, clearance may be reduced to 14 inches. See table (Figure 36 Page 15) for common materials which can be used as wall shield.

- When installed in accordance with the instructions given in this manual, the fireplace system may touch combustible materials at the bottom. 2" clearance is required on sides and back of fireplace, except at the nailing flange, where clearance is 0". The chimney system requires 2" minimum air space.

- Combustible materials should not be in contact with mounting flange of upper frame.

WARNING: DO NOT PACK REQUIRED AIR SPACES WITH INSULATION OR OTHER MATERIALS.

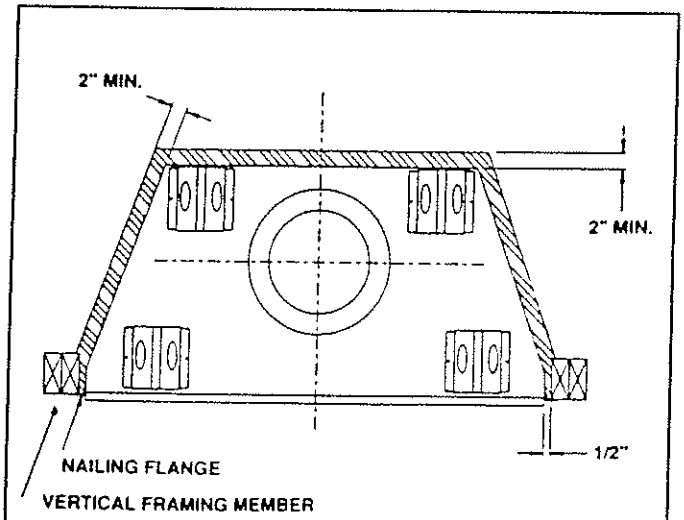



FIGURE 2

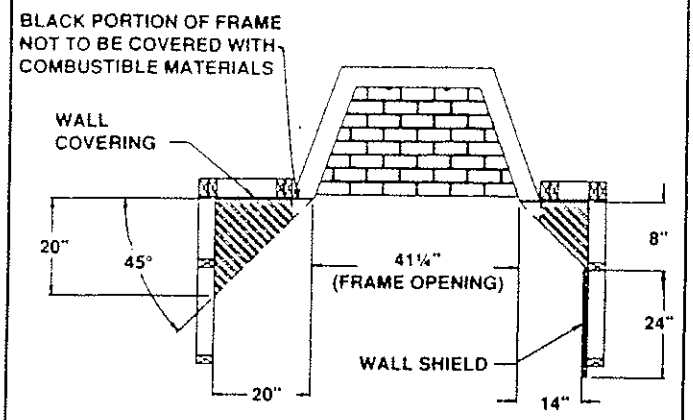
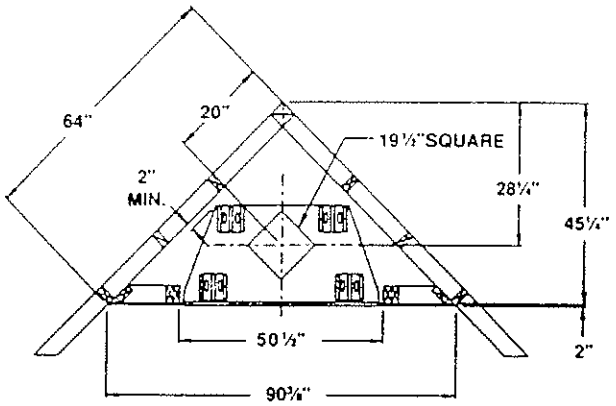
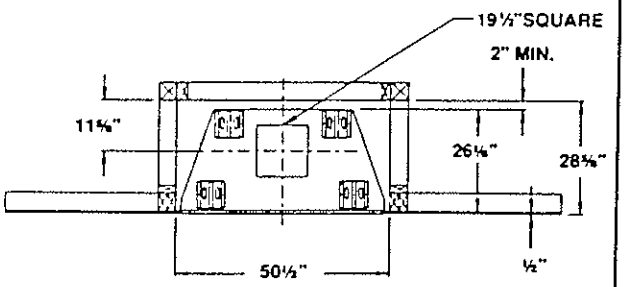



FIGURE 3




NOTE: SEE FIGURE 5 FOR FRONT VIEW OF FRAMING.

FIGURE 4 — FRAMING DIMENSIONS

# FRAMING INSTRUCTIONS

If framing around the fireplace is designed to incorporate book shelves, wood bins, closets, etc., these should not project beyond the safety zone (Figure 3).

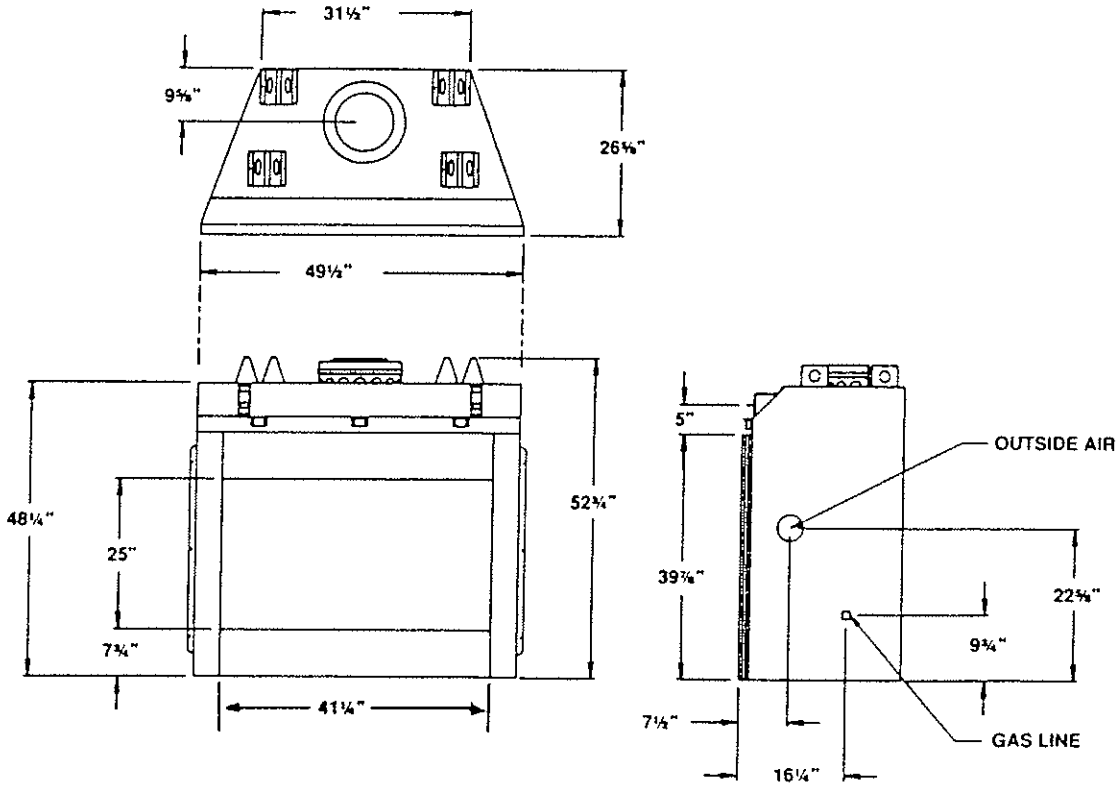



FIGURE 5 — FIREPLACE DIMENSIONS

## INSTALLING YOUR FIREPLACE

STEP 1: Frame the cavity or opening for the fireplace at the chosen location (Figure 6). Move the fireplace into position and install false header and metal safety strips (provided) under the fireplace as shown in Figure 7.

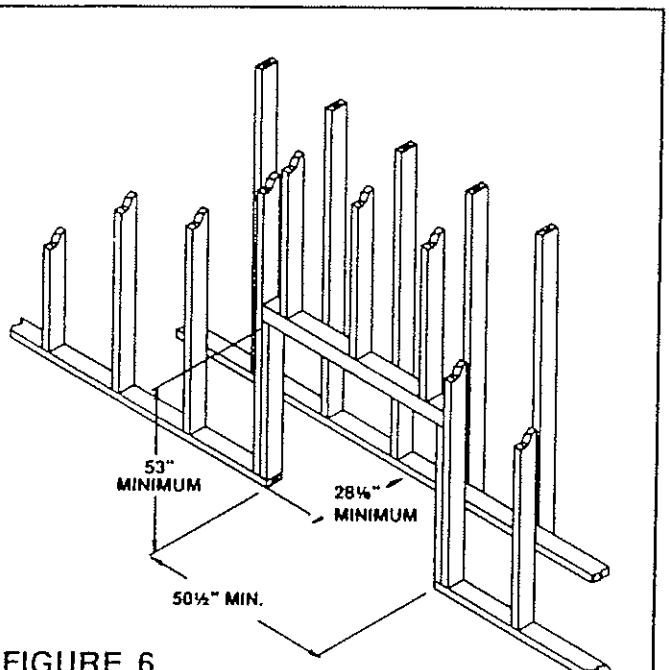



FIGURE 6
FRAMING DIMENSIONS

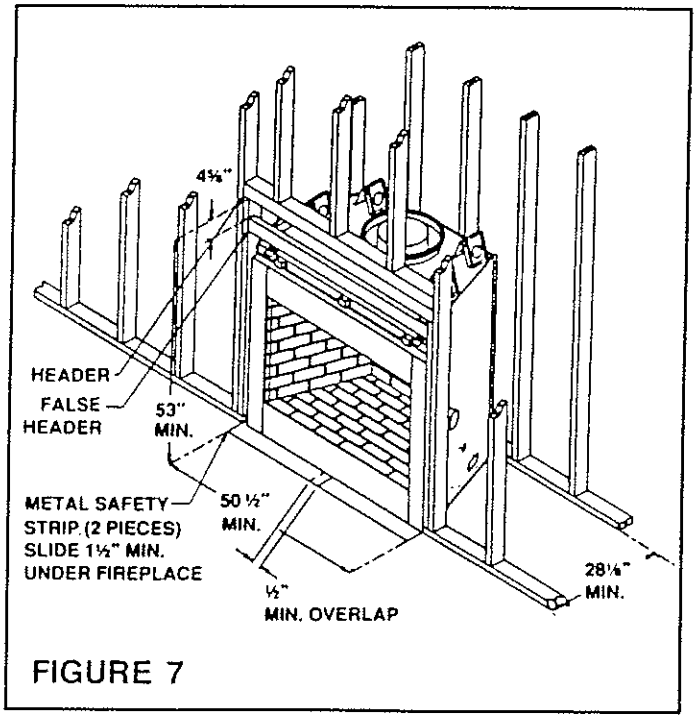



FIGURE 7

## METAL SAFETY STRIP-OFFSET (SUPPLIED BY OTHERS)

When the fireplace and hearth extension are not installed at the same height a custom safety strip will be required. The safety strip shall be constructed of a minimum thickness of .018 galvanized steel and should be shaped as shown in Figure 8.

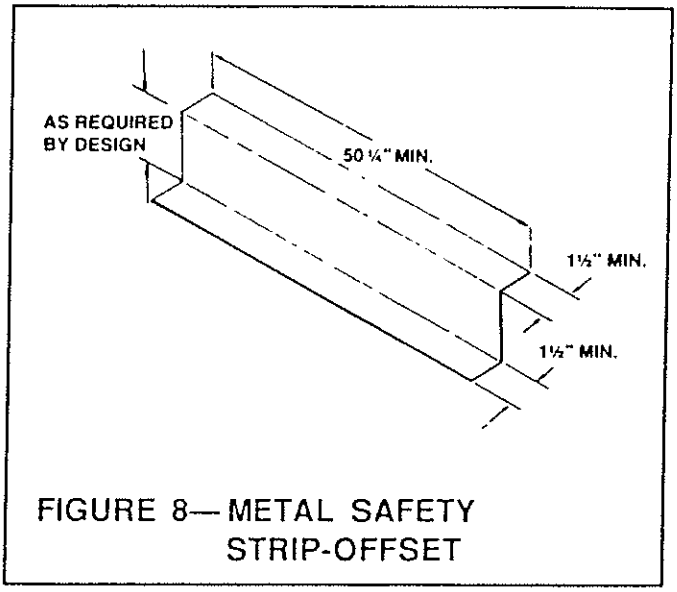



FIGURE 8—METAL SAFETY STRIP-OFFSET

## OUTSIDE COMBUSTION AIR

The installation of an outside air accessory kit is highly recommended. It is very important to assure good fireplace operation in homes which are tightly weathersealed or have ventilating appliances installed.

Determine the source for outside air, which can be installed through an outside wall (Figure 8A) or into a ventilated crawl space (Figure 11). In either case, a 4-1/2" diameter hole will be required for installation of the air inlet assembly. CAUTION: Avoid installing the air inlet where the opening could be blocked by snow, bushes, or other obstacles. The maximum height for the outside air is 50' above the hearth, providing air inlet is terminated a minimum of 3 feet below chimney cap level.

NOTE: COMBUSTION AIR INLET DUCTS MUST NOT TERMINATE IN ATTIC SPACE.

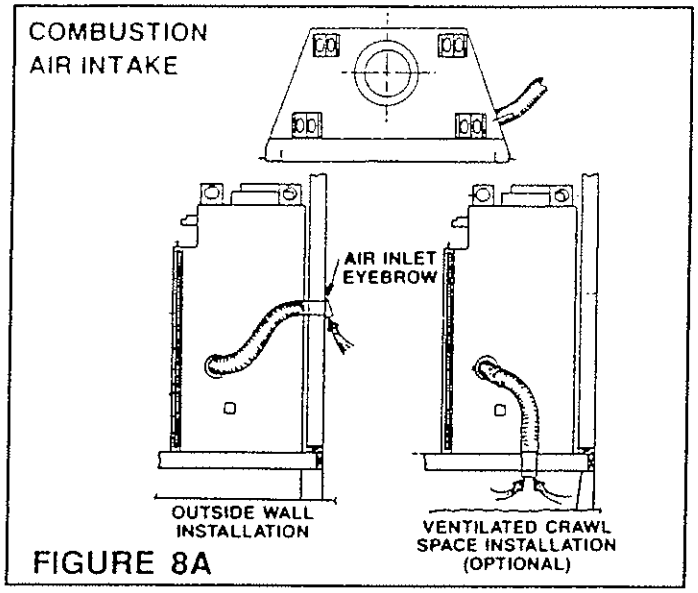


FIGURE 8A

## OUTSIDE WALL INSTALLATION

STEP 1: A 4-1/2" diameter opening will be required for installation of the air inlet assembly. Cut hole where no obstructions are expected.

Install the air inlet eyebrow through wall opening. Secure eyebrow to exterior wall. Push flexible duct onto eyebrow collar until it secures into lances. (Figure 9).

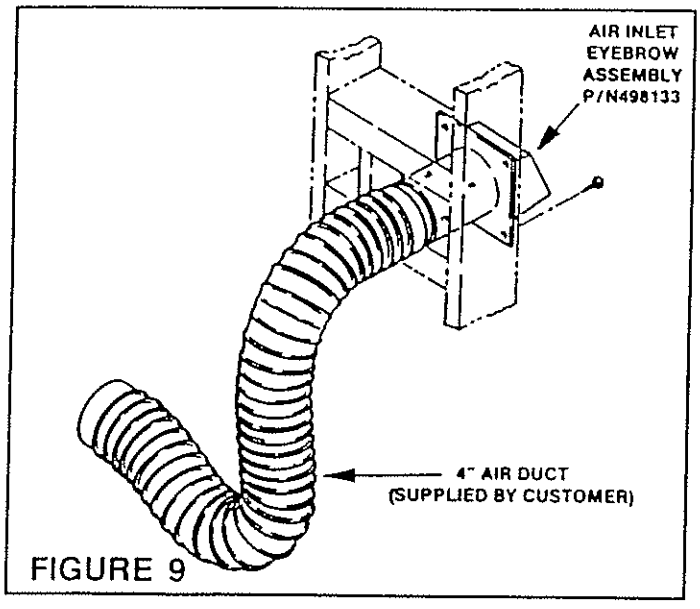


FIGURE 9

STEP 2: Slip the other end of the air duct onto collar, protruding from the right side of the unit. Secure duct with screws or hose clamp.

## VENTILATED CRAWL SPACE INSTALLATION

STEP 1: A 4-1/2" diameter opening will be required for installation of the air inlet assembly. Cut hole where no obstructions are expected. Install the air inlet assembly through floor opening. Secure assembly to floor. Slip flexible duct onto air inlet assembly collar. Secure flexible duct to collar with a hose clamp. (Figure 10).

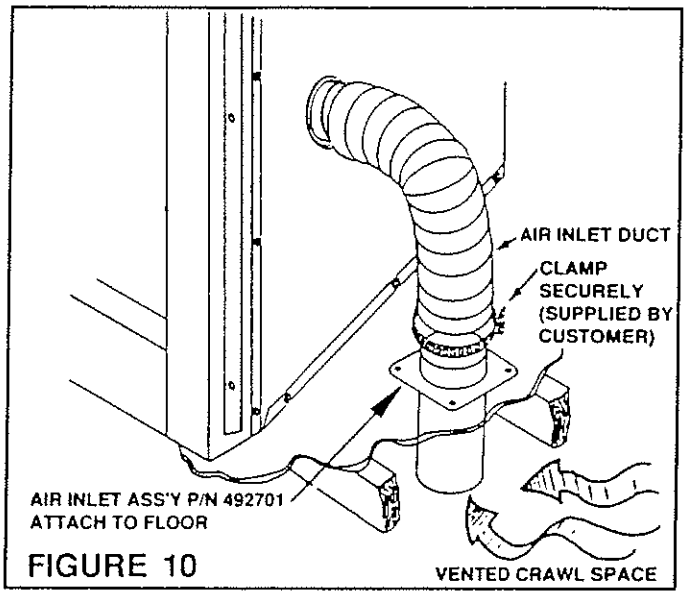


FIGURE 10

STEP 2: Slip the other end of the air duct onto collar, protruding from the right side of the unit. Secure duct with screws or hose clamp.

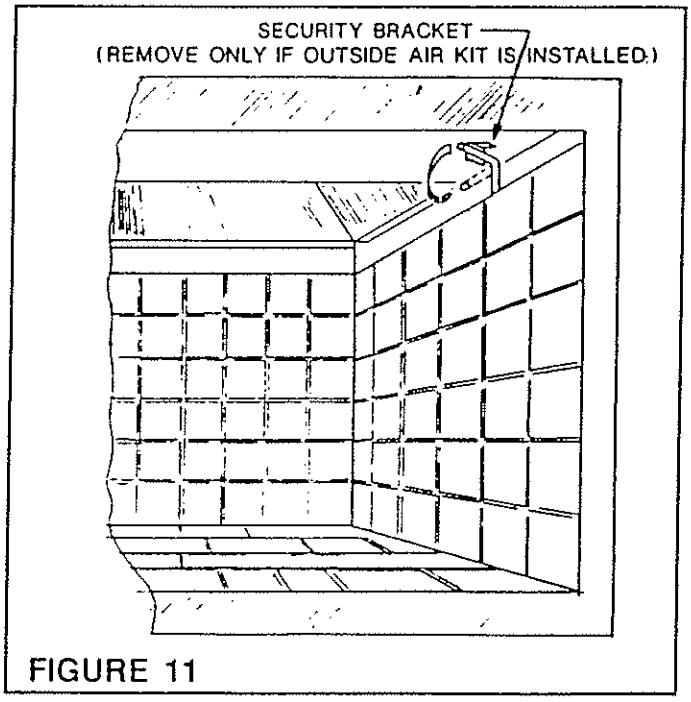


FIGURE 11

When the air duct is connected to the unit remove security bracket preventing outside air damper rod to rotate, as shown in Figure 11.

# EXAMPLES OF FIREPLACE AND CHIMNEY DESIGNS

FIGURE 12

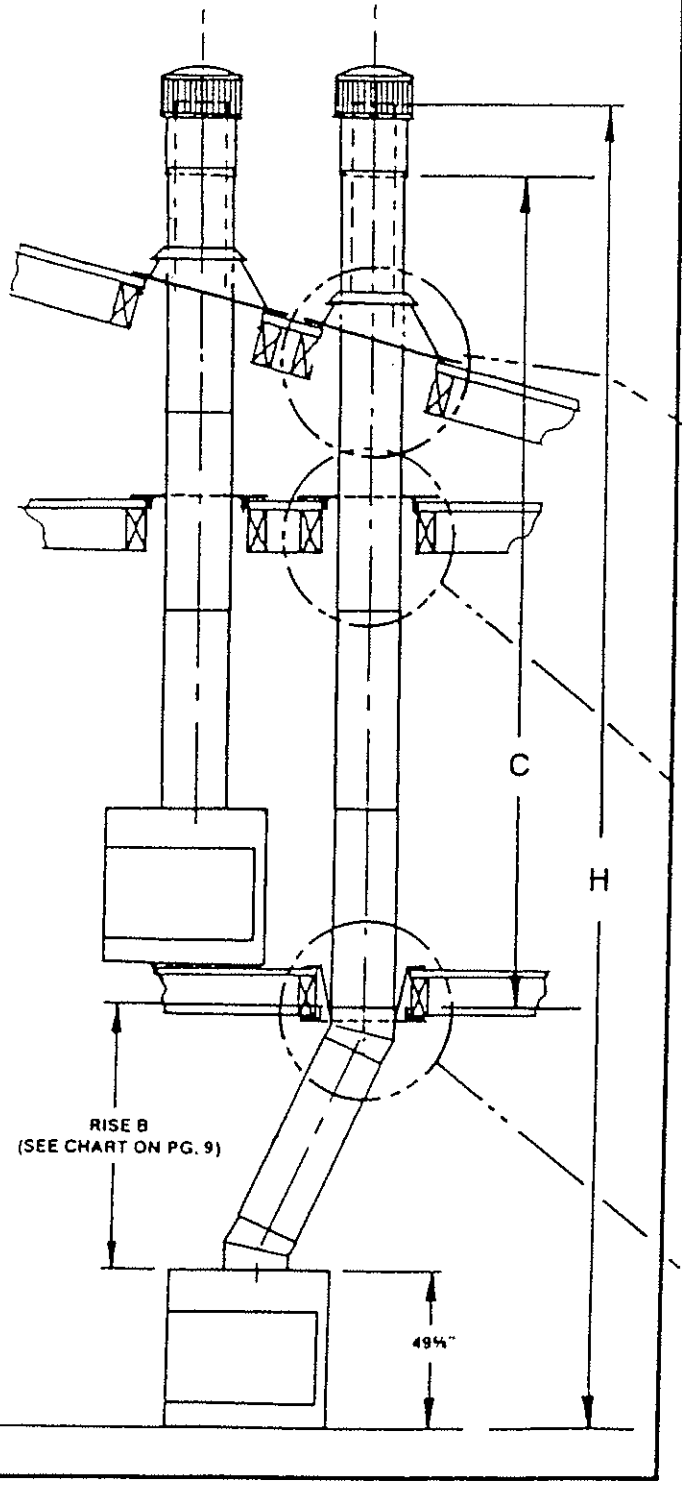
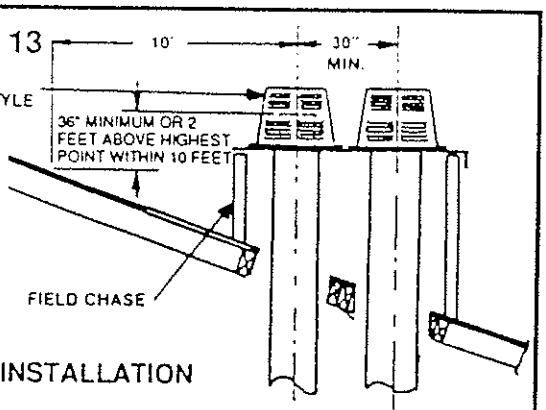



FIGURE 13




CHASE INSTALLATION

FIGURE 14

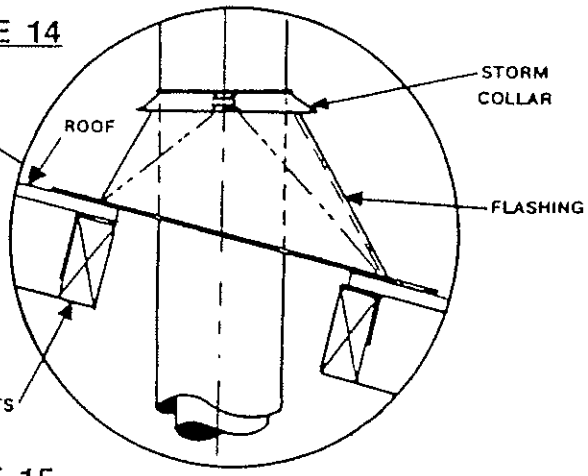



FIGURE 15

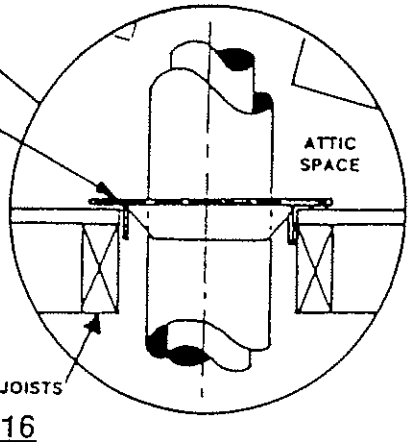
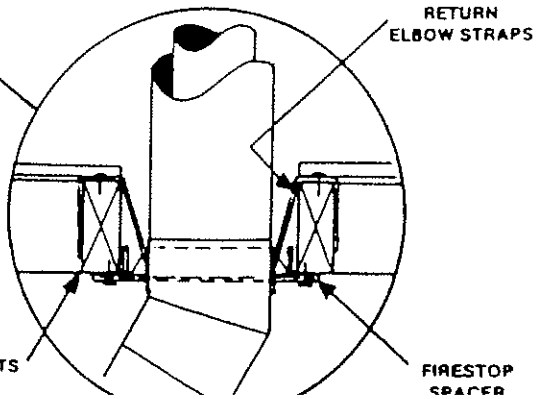



FIGURE 16



# INSTALLATION ON FIELD CONSTRUCTED CHASE

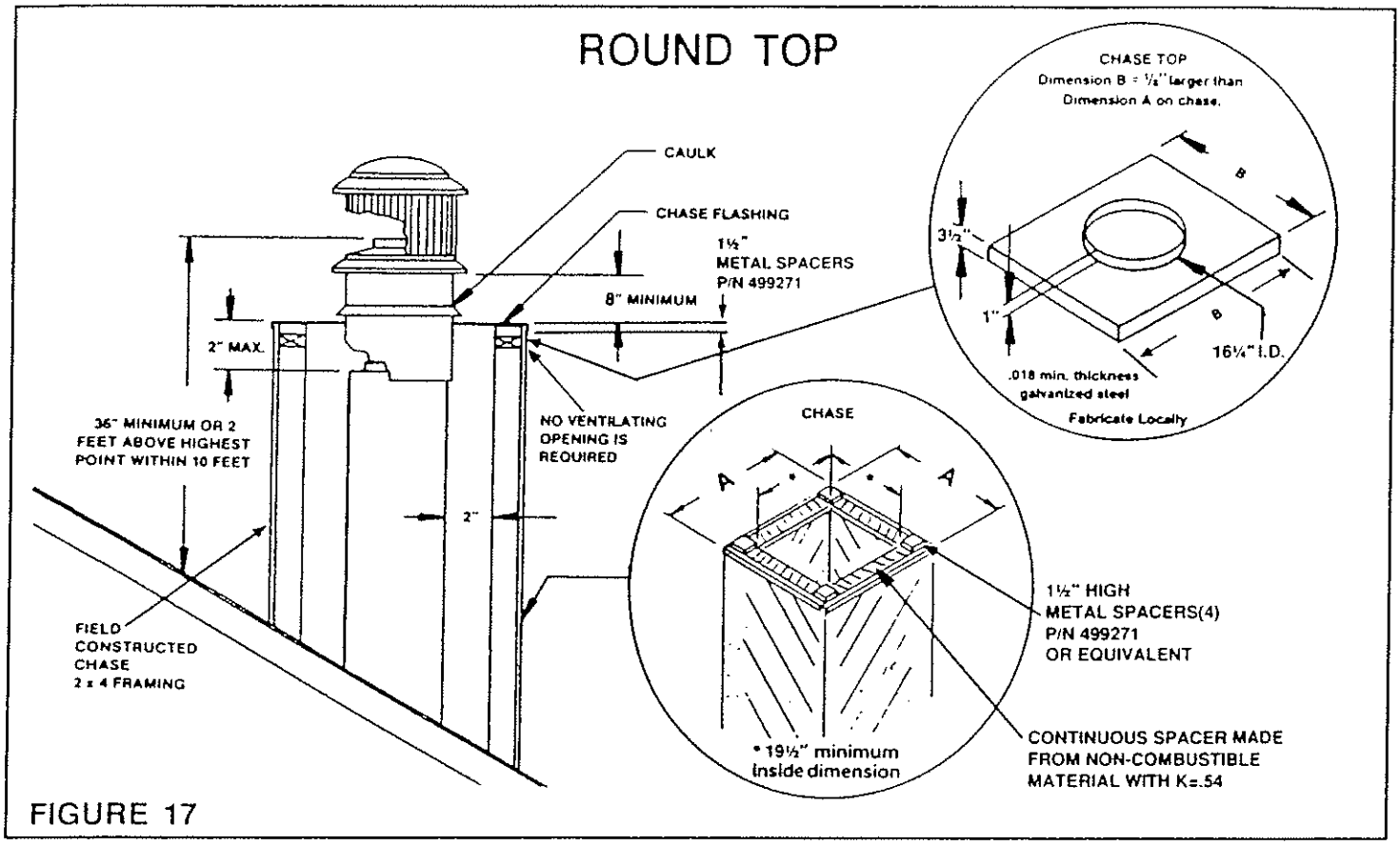



FIGURE 17

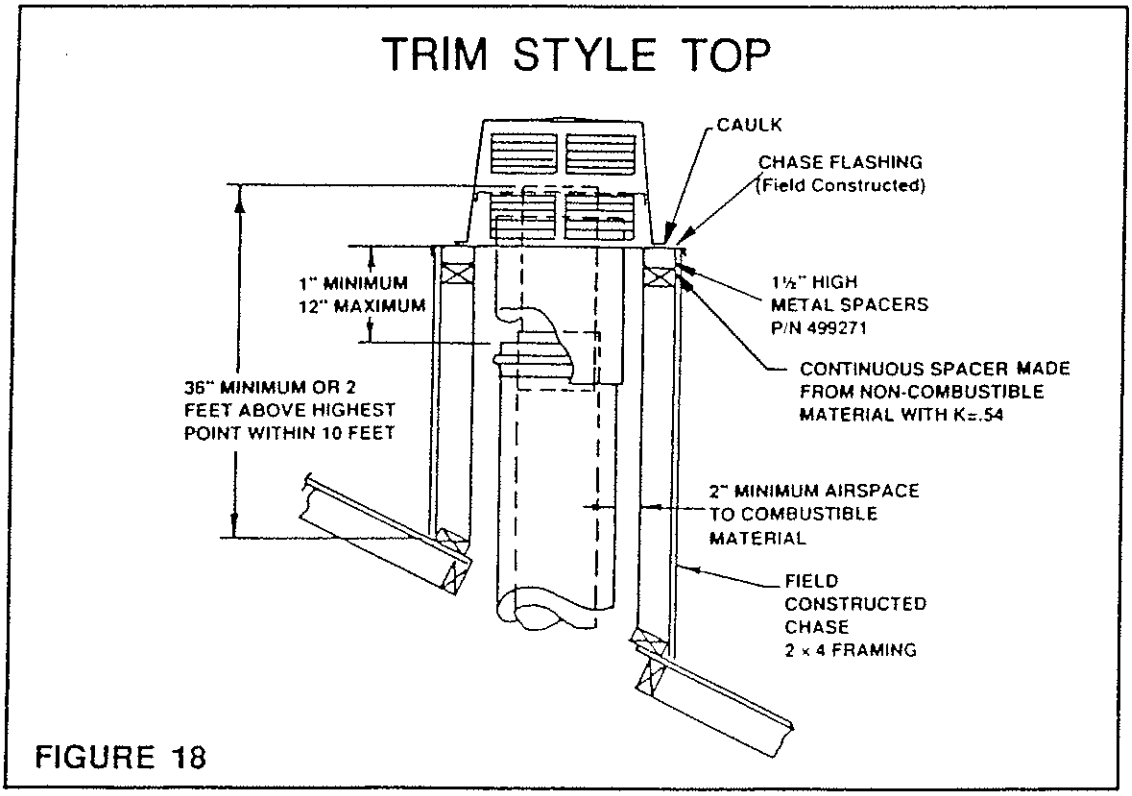



FIGURE 18

# HOW TO DETERMINE YOUR FIREPLACE SYSTEM

| | |
|---|---|
| 1. DETERMINE TOTAL HEIGHT | |
| 2. HEIGHT OF FIREPLACE | 52-3/4" |
| 3. RISE OF ELBOWS INCLUDING PIPE Use single offset chart page 9 | |
| 4. LINEAL GAIN OF RTL-100 TOP (See chart | |
| 4a. HEIGHT OF TST-10 TOP | |
| 5. TOTAL OF LINES 2 THROUGH 4a | |
| 6. SUBTRACT LINE 5 FROM 1 | |

7. LINE 6 IS DIMENSION C. THE LENGTH OF PIPE NEEDED TO COMPLETE INSTALLATION (Refer to Chimney Height Chart)

| | QUANTITY | |
|---|---|---|
| 8. 12" PIECES OF PIPE | | |
| 9. 18" PIECES OF PIPE | | |
| 10. 36" PIECES OF PIPE | | |
| SUBTOTAL | | |

12. TOTAL OF LINES 5 AND 11 (SHOULD EQUAL LINE 1)

## LINEAL GAIN CHART

| STOCK # | DESCRIPTION | LINEAL GAIN |
|---|---|---|
| 792870-2 | A41M MASONRY FIREPLACE | 52-3/4" |
| 793124 | 12" DOUBLE-WALL PIPE | 10-3/4" |
| 793125 | 18" DOUBLE-WALL PIPE | 16-3/4" |
| 793127 | 36" DOUBLE-WALL PIPE | 34-3/4" |
| 793129 | 12" CHIMNEY SUPPORT | 10-3/4" |
| 792901 | "CLASSIC" ROUND TOP ASSEMBLY | 5" - 15" |
| 793096 | TRIM STYLE TOP ASSEMBLY | 10" - 15" |

**10" DIAMETER CHIMNEY HEIGHT CHART (DIMENSION C FIGURE 7)**

| MAXIMUM | PIPE LENGTHS | | | MAXIMUM | PIPE LENGTHS | | | MAXIMUM | PIPE LENGTHS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HEIGHT | 12" | 18" | 36" | HEIGHT | 12" | 18" | 36" | HEIGHT | 12" | 18" | 36" |
| 8' 9" | — | — | 3 | 24' 8" | — | 1 | 8 | 40' 9" | — | — | 14 |
| 9' 1" | 2 | 1 | 2 | 25' 1" | 2 | — | 8 | 41' 0" | 2 | 1 | 13 |
| 9' 8" | 1 | — | 3 | 25' 7" | 1 | 1 | 8 | 41' 8" | 1 | — | 14 |
| 10' 2" | — | 1 | 3 | 26' 2" | — | — | 9 | 42' 0" | 2 | 1 | 13 |
| 10' 6" | 2 | — | 3 | 26' 6" | 2 | 1 | 8 | 42' 6" | 2 | — | 14 |
| 11' 0" | 1 | 1 | 3 | 27' 1" | 1 | — | 9 | 43' 0" | 1 | 1 | 14 |
| 11' 8" | — | — | 4 | 27' 7" | — | 1 | 9 | 43' 8" | — | — | 15 |
| 12' 0" | 2 | 1 | 3 | 28' 0" | 2 | — | 9 | 43' 11" | 2 | 1 | 14 |
| 12' 6" | 1 | — | 4 | 28' 6" | 1 | 1 | 9 | 44' 6" | 1 | — | 15 |
| 13' 0" | — | 1 | 4 | 29' 1" | — | — | 10 | 45' 0" | — | 1 | 15 |
| 13' 5" | 2 | — | 4 | 29' 5" | 2 | — | 9 | 45' 5" | 2 | — | 15 |
| 14' 0" | 1 | 1 | 4 | 30' 0" | 1 | — | 10 | 45' 11" | 1 | 1 | 15 |
| 14' 6" | — | — | 5 | 30' 6" | — | 1 | 10 | 46' 6" | — | — | 16 |
| 14' 10" | 2 | 1 | 4 | 30' 11" | 2 | — | 10 | 46' 10" | 2 | 1 | 15 |
| 15' 5" | 1 | — | 5 | 31' 5" | 1 | 1 | 10 | 47' 5" | 1 | — | 16 |
| 15' 11" | — | 1 | 5 | 32' 0" | — | — | 11 | 47' 11" | — | 1 | 16 |
| 16' 4" | 2 | — | 5 | 32' 4" | 2 | 1 | 10 | 48' 4" | 2 | — | 16 |
| 16' 10" | 1 | 1 | 5 | 32' 11" | 1 | — | 11 | 48' 10" | 1 | 1 | 16 |
| 17' 5" | — | — | 6 | 33' 5" | — | 1 | 11 | 49' 4" | — | — | 17 |
| 17' 9" | 2 | 1 | 5 | 33' 10" | 2 | — | 11 | 49' 9" | 2 | 1 | 16 |
| 18' 4" | 1 | — | 6 | 34' 4" | 1 | 1 | 11 | 50' 4" | 1 | — | 17 |
| 18' 10" | — | 1 | 6 | 34' 11" | — | — | 12 | 50' 10" | — | 1 | 17 |
| 19' 3" | 2 | — | 6 | 35' 3" | 2 | 1 | 11 | 51' 3" | 2 | — | 17 |
| 19' 9" | 1 | 1 | 6 | 35' 10" | 1 | — | 12 | 51' 9" | 1 | 1 | 17 |
| 20' 4" | — | — | 7 | 36' 3" | — | 1 | 13 | 52' 4" | — | — | 18 |
| 20' 8" | 2 | 1 | 6 | 36' 9" | 2 | — | 12 | 52' 8" | 2 | 1 | 17 |
| 21' 3" | 1 | — | 7 | 37' 3" | 1 | 1 | 12 | 53' 3" | 1 | — | 18 |
| 21' 9" | — | 1 | 7 | 37' 10" | — | — | 13 | 53' 9" | — | 1 | 18 |
| 22' 2" | 2 | — | 7 | 38' 2" | 2 | 1 | 12 | 54' 2" | 2 | — | 18 |
| 22' 8" | 1 | 1 | 7 | 38' 9" | 1 | — | 13 | 54' 8" | 1 | 1 | 18 |
| 23' 3" | — | — | 8 | 39' 3" | — | 1 | 13 | 55' 3" | — | — | 19 |
| 23' 7" | 2 | 1 | 7 | 39' 8" | 2 | — | 13 | 55' 7" | 2 | 1 | 18 |

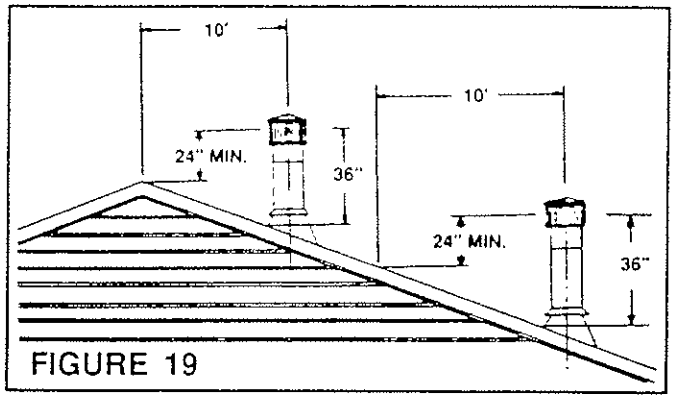


FIGURE 19

**10' Rule — If chimney is within 10' of the roof peak, adjacent wall or building, the top should extend a minimum of 2' above the peak. When further than 10' from the roof peak, the tip should extend 2' higher than the closest point 10' away horizontally. (See Figure 19).**

IMPORTANT: If an exposed portion of chimney is greater than 5 feet above the roof line, use support wires to keep the chimney secure. The support wires may be attached to the outer pipe of the chimney with screws, provided the screws are not long enough to penetrate the inner flue pipe.

## MINIMUM CHIMNEY HEIGHT

The recommended minimum chimney height of the chimney system is 15 feet. This is based on wind and pressure conditions usually found around the average homesite. Unusual conditions such as adjacent hills, tall trees, high wind areas, etc. can cause downdrafts to occur in any chimney system and would therefore require an extra length of pipe to ensure the proper draft conditions during the use of the fireplace. Consult your supplier or your local building inspector for any information they may have regarding local weather characteristics.

The minimum height with 2 elbows (1 set) is 18 feet. The minimum height with 4 elbows (2 sets) is 25 feet.

## MAXIMUM CHIMNEY HEIGHT

This fireplace system is approved for an installation of 60 feet high. This measurement includes the fireplace, chimney sections, elbow sets and the effective height of the termination assembly.

### CHIMNEY MAINTENANCE:

Regular inspection and cleaning of the chimney system is important. Refer to the Warranty and Operations Manual for instructions.

# INSTRUCTIONS FOR OFFSET OF CHIMNEY USING ELBOWS

## TO INSTALL ELBOWS

1. To achieve desired offset, you may install combinations of 12", 18", 36", lengths of double wall pipe (see single offset chart and Figure 20A).

2. Chimney weight above offset rests on return elbow. Straps must be securely nailed to rafters or joists. (See Figure 20B).

3. Maximum length of pipe between supports (return elbow or chimney pipe support) is 6' of angled run. Maximum of two 6' angled run sections per chimney system. (Figure 20C).

4. The maximum allowable offset is 30°. Elbows must be secured to the pipe utilizing a minimum of three screws per joint. Fasten screw through outer pipe slot. Drill 1/8" pilot hole or use self-drilling screws provided.

FIGURE 20A

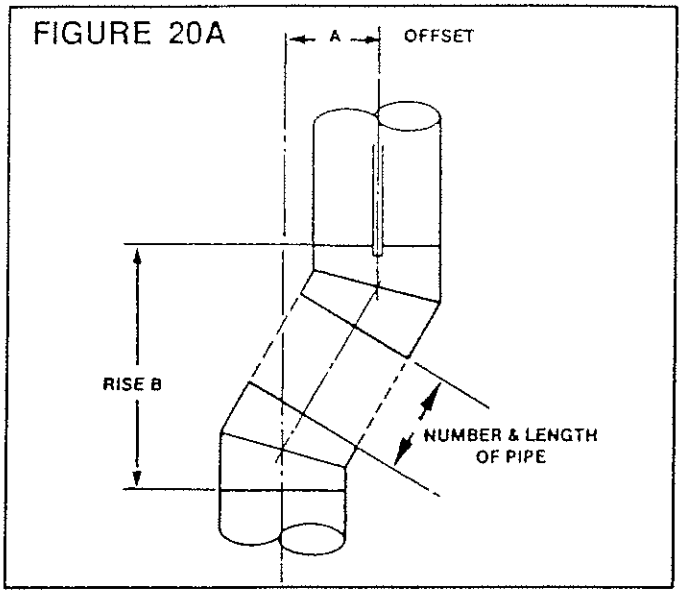
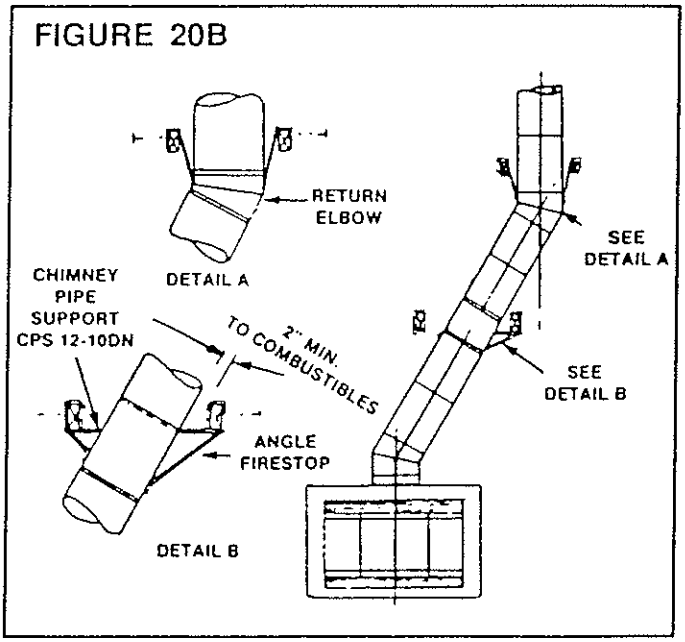


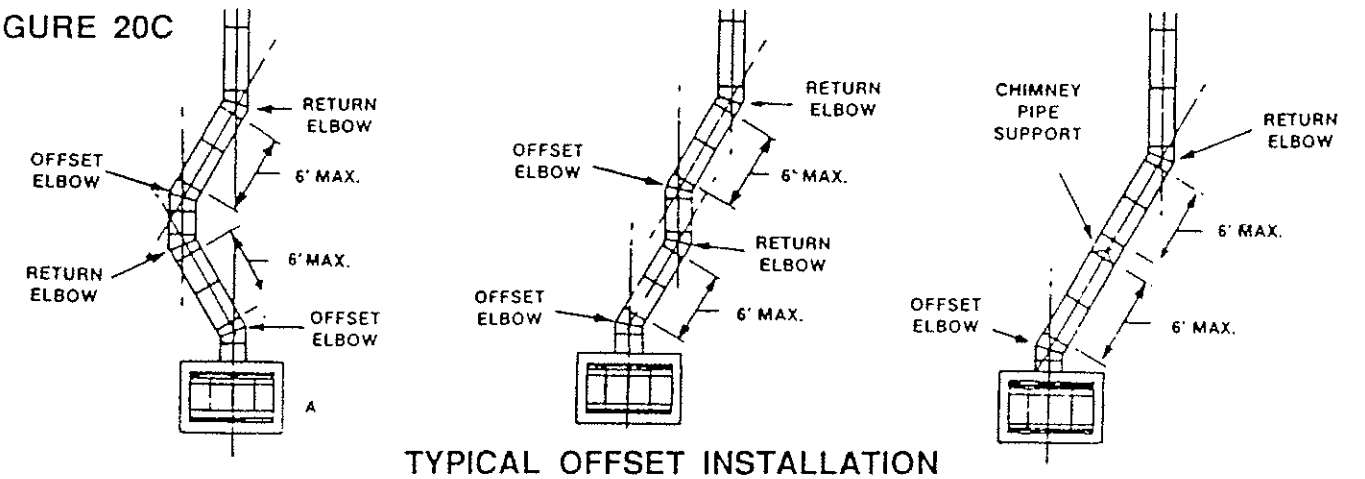

FIGURE 20B




SINGLE OFFSET CHART, 10" PIPE

| NUMBER AND LENGTH OF DOUBLE WALL PIPE | | | | 1-15° OFFSET ELBOW 1-15° RETURN ELBOW | | 1-30° OFFSET ELBOW 1-30° RETURN ELBOW | |
|---|---|---|---|---|---|---|---|
| 12" | 18" | 36" | CHIMNEY SUPT. | A | B | A | B |
| - | - | - | - | 2-3/4" | 21-3/4" | 5-1/4" | 20-3/4" |
| 1 | - | - | - | 5-1/2" | 32-1/4" | 10-3/4" | 30-1/4" |
| - | 1 | - | - | 7-1/4" | 38-3/4" | 13-3/4" | 35-1/4" |
| 2 | - | - | - | 8-1/2" | 43-1/2" | 16-1/4" | 39-1/2" |
| 1 | 1 | - | - | 9-3/4" | 48-1/2" | 19-1/4" | 44-3/4" |
| - | 2 | - | - | 11-1/2" | 54-1/2" | 22-1/4" | 50" |
| - | - | 1 | - | 11-3/4" | 55-1/2" | 22-3/4" | 50-3/4" |
| 2 | 1 | - | - | 12-3/4" | 59" | 24-1/2" | 54-1/4" |
| 1 | 2 | - | - | 14-1/4" | 64-3/4" | 27-1/2" | 59-1/2" |
| 1 | - | 1 | - | 14-1/2" | 66" | 28-1/4" | 60-1/2" |
| 2 | 1 | - | 1 | 15-1/2" | 69-3/4" | 30" | 63-3/4" |
| - | 3 | - | - | 15-3/4" | 70-3/4" | 30-1/2" | 64-1/2" |
| - | 1 | 1 | - | 16" | 71-3/4" | 31-1/4" | 65-1/2" |
| 2 | 2 | - | - | 17" | 75-1/2" | 33" | 68-3/4" |
| 2 | - | 1 | - | 17-1/2" | 76-1/2" | 33-1/2" | 69-3/4" |
| 1 | 1 | 1 | - | 18-3/4" | 82-1/4" | 36-1/2" | 75" |
| 2 | - | 1 | 1 | 20-1/4" | 87" | 39" | 79-1/4" |
| - | - | 2 | - | 20-3/4" | 89-1/4" | 40" | 81-1/4" |
| 1 | 1 | 1 | 1 | 21-3/4" | 92-3/4" | 42-1/4" | 85" |
| - | - | 2 | 1 | 23-1/2" | 99-3/4" | 45-1/2" | 90-1/2" |

FIGURE 20C



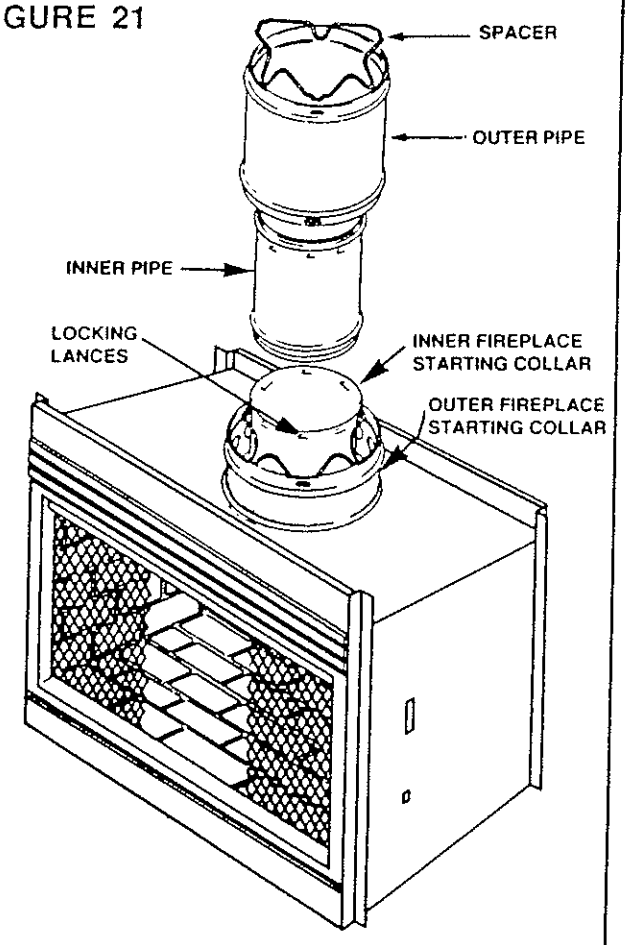

TYPICAL OFFSET INSTALLATION

# INSTALLING YOUR DOUBLE-WALL CHIMNEY SYSTEM

BEFORE YOU BEGIN INSTALLING YOUR DOUBLE WALL CHIMNEY SYSTEM DETERMINE HOW MUCH PIPE AND ACCESSORIES YOU WILL NEED. SEE PAGE 6 FOR EXAMPLES OF CHIMNEY AND TERMINATION DESIGNS.

Each double-wall chimney section consists of an outer pipe, flue pipe and single-piece wire spacer. The pipe sections are not unitized and must be assembled independently as the chimney is installed. (Figure 21).

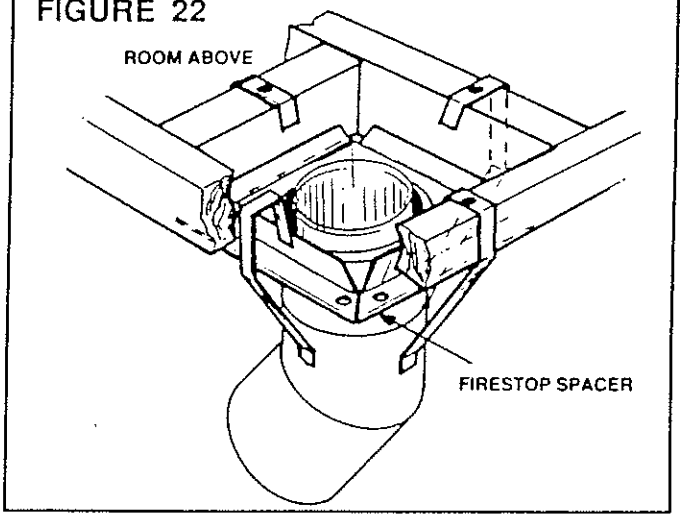
FIGURE 21




## FIRESTOP SPACERS

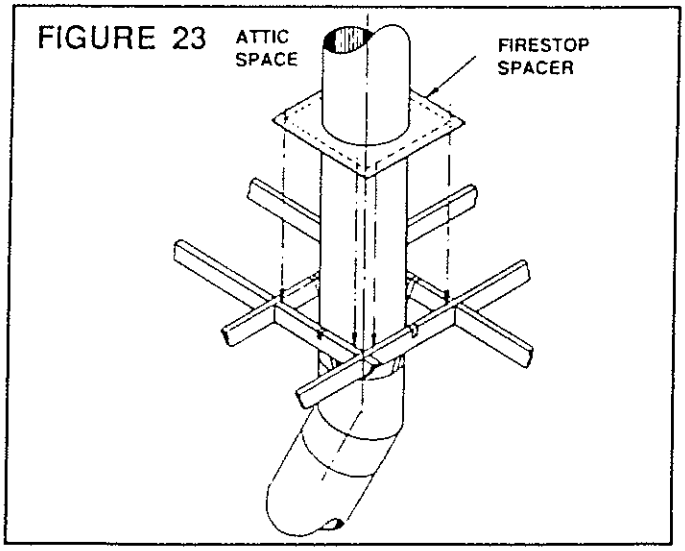
Firestop spacers are required at each point where the chimney penetrates a floor or ceiling joist space. Their purpose is twofold: they establish and maintain the required clearance between the chimney and combustible materials, and they provide complete separation from one floor space to another floor or attic space, as required by most codes. When penetrating a floor or ceiling at an angle, either the 15° or 30° firestop must be used. (See Figure 22).

FIGURE 22




If pipe passes through a framed opening *between floors*, install a firestop spacer to the *bottom* of the joists (Figure 22). When pipe passes *into the attic space*, install the firestop spacer on the *top* of the joists (Figure 23) and secure with sheet metal screws or nails.

FIGURE 23

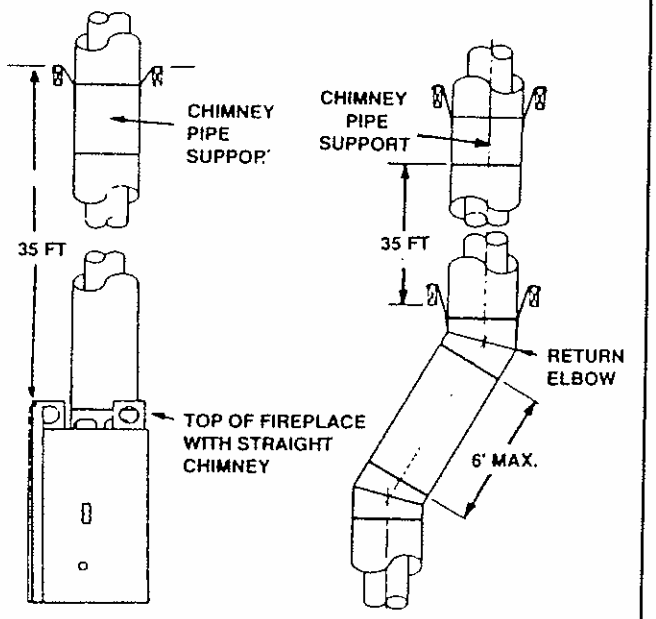


## CHIMNEY PIPE SUPPORT

The chimney pipe support is a double-wall, unitized 12" length of pipe and is designed to relieve the extra weight load on the fireplace and elbows when high chimneys are installed.

A CHIMNEY SUPPORT IS REQUIRED AFTER A STRAIGHT CHIMNEY RUN OF 35 FEET ABOVE FIREPLACE OF RETURN ELBOW. (Figure 24).

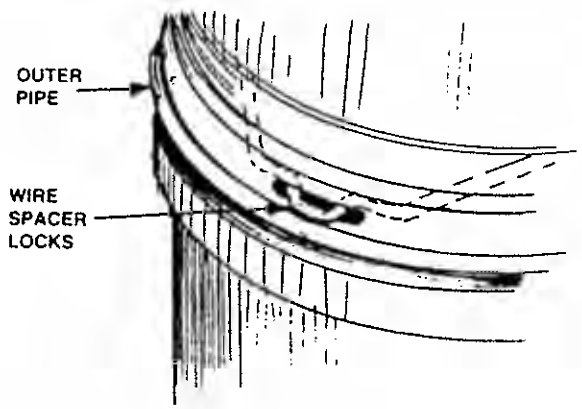
FIGURE 24




STEP 1: When starting the chimney install the inner pipe section by fitting the male end into the inner fireplace starting collar. Make sure the male end is fully inserted to lock into the lances. (Figure 25).

STEP 2: Fit the outer galvanized pipe with spacer into starting collar on top of fireplace. Rotate the outer pipe until wire spacer locks snap through the outer pipe slots. (Figure 25).

FIGURE 25




STEP 3: If you are remodeling, cover exposed pipe and cut a 20" hole on ceiling directly above center of chimney pipe (Use Plumb Bob).

Continue to assemble chimney sections as outlined above, making sure that both inner and outer sections are locked together.

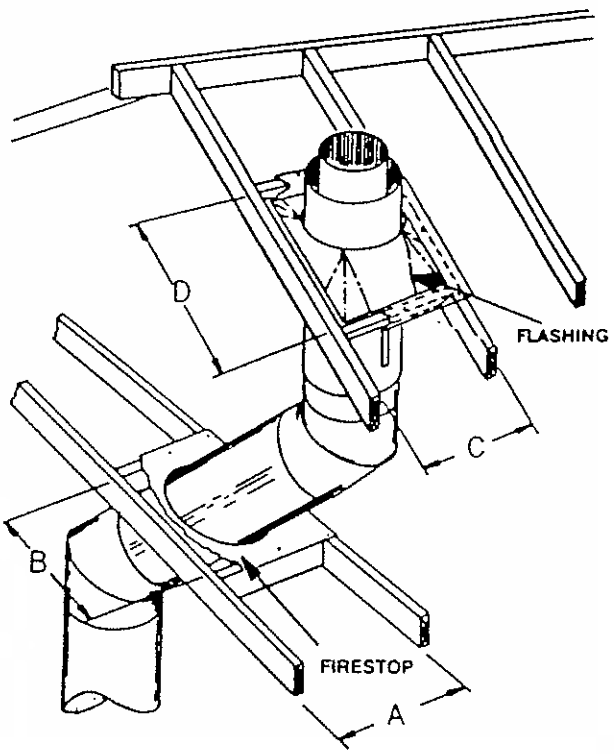
STEP 4: Determine the location of the hole to be cut in the roof. The roof hole cut-out depends on the pitch of the roof, so refer to the chart on Figure 26.

FIGURE 26

| CEILING OPENING CHART | | | |
|---|---|---|---|
| CHIMNEY SET UP | OPENING | | USE FIRESTOP PART NO. |
| | A | B | |
| VERTICAL | 19 1/2 | 19 1/2 | 792990 |
| 15° OFFSET | 19 1/2 | 22 1/4 | 793102 |
| 30° OFFSET | 19 1/2 | 27 | 792969 |

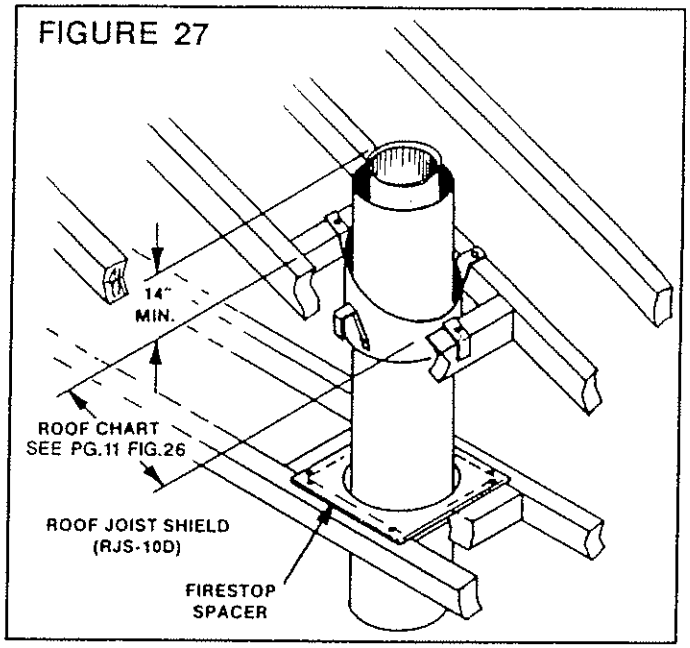
| ROOF OPENING CHART | | |
|---|---|---|
| | OPENING | |
| PITCH | C | D |
| FLAT | 19 1/2 | 19 1/2 |
| 6/12 | 19 1/2 | 22 |
| 12/12 | 19 1/2 | 27 3/4 |
| 18/12 | 19 1/2 | 35 1/2 |
| 24/12 | 19 1/2 | 43 3/4 |

| RECOMMENDED FLASHING | |
|---|---|
| ROOF PITCH | FLASHING PART NO. |
| 0 - 6/12 | 792975 |
| 6 - 12/12 | 792976 |
| 12 - 18/12 | 792977 |
| 18 - 24/12 | 792978 |



STEP 5: After cutting the hole in the roof, uncover the pipe and add sections until the chimney extends a minimum of 14 inches above the highest point of the roof cutout. (Figure 27).

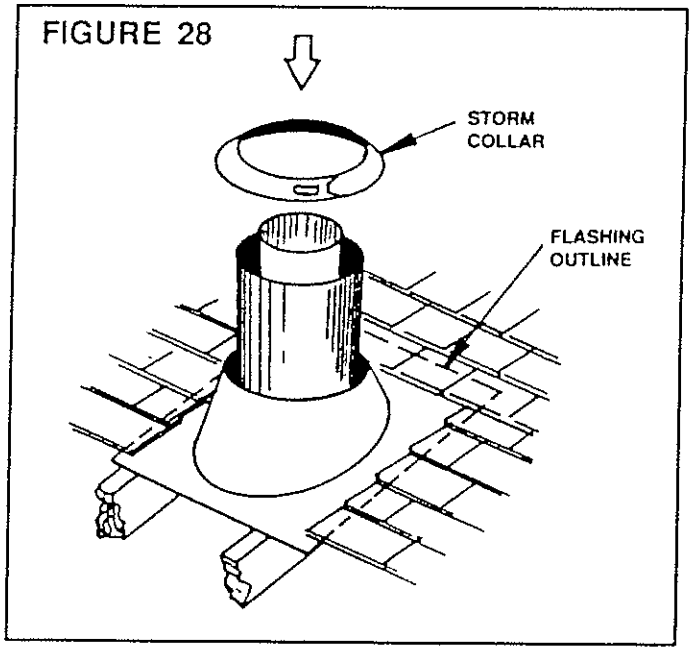
FIGURE 27




STEP 6: Slide the roof joist shield over the outer pipe. It must be positioned to cover the joist at all points around the chimney pipe. It may be necessary to trim the shield slightly to match the slope of the roof. Attach the shield to the joists using the straps provided. (See Figure 27).

STEP 7: Position the flashing over the chimney and flat on the roof. Mark an outline of the flashing on the roof and remove the flashing. Remove all nails within the outlined area. (Figure 28).

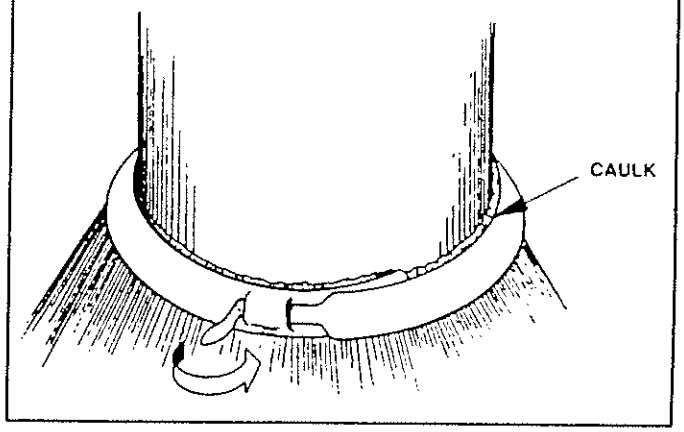
FIGURE 28




STEP 8: Place flashing into position on unshingled roof. Hold in position by nailing shingles in place over the flashing edges.

STEP 9: Install storm collar on the chimney and push down near the top of the flashing. Apply waterproof caulking around the top of the storm collar. (Figure 29).

FIGURE 29




STEP 10: Install termination on last section of pipe. There are different terminations approved for this chimney system. The Round Top Long is adjustable to compensate for height variations. The Trim Style Top is designed to be used on a chase installation of decorative chimney enclosure only. For details, consult the installation instructions of the termination being used. (See Figure 30).

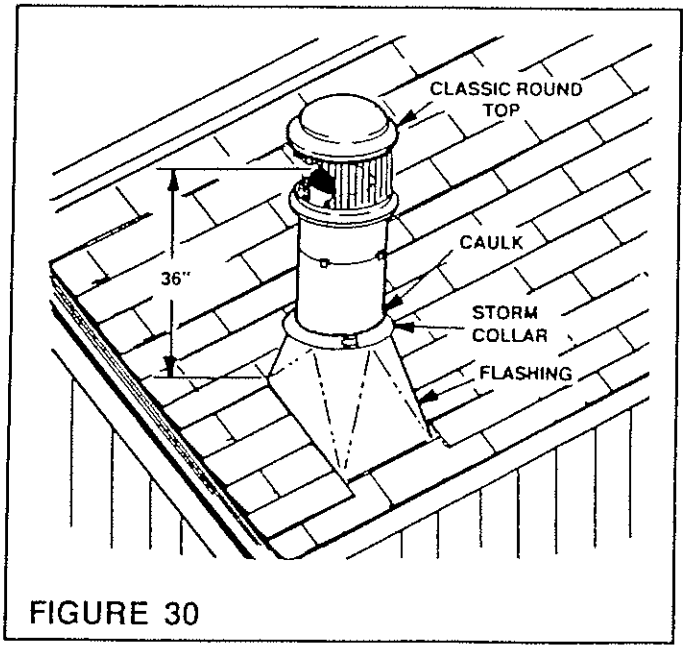



FIGURE 30

NOTE: You may wish to caulk seam notches on all joints above the flashing and paint all exposed parts of the chimney with galvanized primer paint. A coat of paint to match the house may then be applied.

# INSTALLING THE GAS LINE

IMPORTANT: Install the gas line before finishing the fireplace. If desired, a decorative gas appliance may be installed. Use only iron pipe, 1/2" size, and appropriate fittings. When installing gas line, a valve designed for installation outside the fireplace is required (Figure 31).

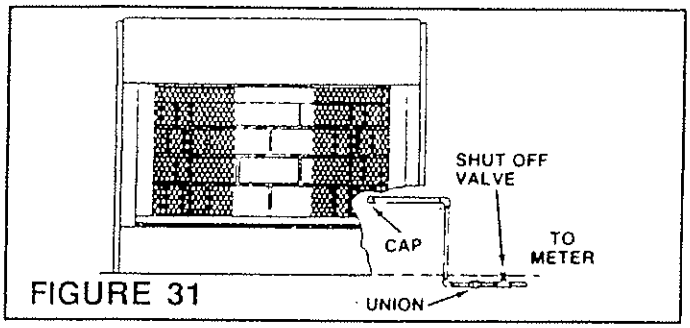


FIGURE 31

The unit is shipped from the factory ready for installation. The gas line may be installed to enter the fireplace from either side. Refer to Figure 5 for hole location.

The gas line is intended for connection to a decorative gas appliance incorporating an automatic shutoff device and complying with the Standard for Decorative Gas Appliances for Installation in Vented Fireplaces, ANSI Z21.60 Decorative gas appliance should be installed in accordance with the National Fuel Gas Code. ANSI Z223.1. and NFPA 54.

BEFORE DOING ANYTHING, MAKE SURE THE GAS VALVE LOCATED OUTSIDE YOUR FIREPLACE IS SHUT OFF.

STEP 1: Remove gas line cover. Save screws. Remove insulation from inside gas conduit sleeve. Save insulation.

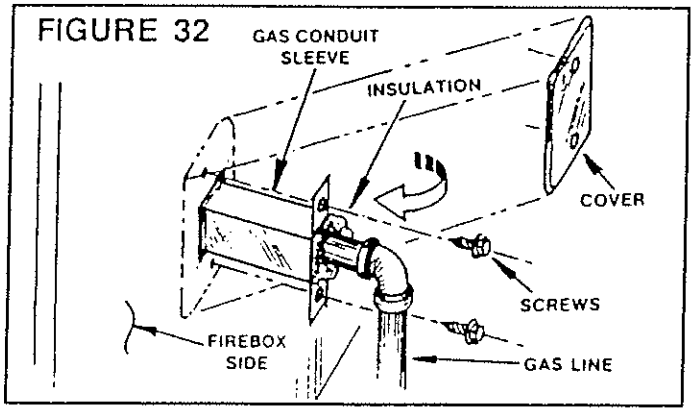


FIGURE 32

STEP 2: With gas line conduit sleeve in place strike the back of the refractory using a light punch.

STEP 3: Install a 7 inch minimum nipple to reach inside the fireplace. Allow enough thread to install cap (or elbow if continuing installation).

STEP 4: Repack insulation into conduit sleeve all around nipple. Replace screws. (Figure 32).

STEP 5: Seal hole around gas line on refractory wall with cement or any other non-combustible material. (Figure 33).

STEP 6: Finish installation by either capping the gas line or attaching a gas log.

CAUTION: WHEN USING THE DECORATIVE APPLIANCE THE FIREPLACE DAMPER MUST BE SET IN THE FULLY OPEN POSITION.

"THIS INSTALLATION IS NOT LISTED BY UNDERWRITERS LABORATORIES, INC."

However, the gas log lighter has been tested by RADCO LAB. in accordance with ICBO requirements and is approved for use with this fireplace model.

# INSTALLATION OF GAS LOG LIGHTER

IF YOUR FIREPLACE IS PROVIDED WITH A GAS LINE FOR ATTACHMENT TO A GAS LOG LIGHTER, PLEASE FOLLOW THESE INSTRUCTIONS CAREFULLY.

1) BEFORE DOING ANYTHING, MAKE SURE THE GAS VALVE LOCATED OUTSIDE YOUR FIREPLACE IS SHUT OFF.
2) REMOVE THE CAP AT END OF GAS PIPELINE PROTRUDING FROM SIDE OF THE REFRACTORY. (SEE FIG. 33).
3) CONNECT FITTINGS:
   TWO - 1/2 INCH DIA. 45" ELBOW
   ONE - 1/2 INCH DIA. CLOSE NIPPLE
4) INSTALL GAS LOG LIGHTER MAX. 24" LONG. 1/2 INCH DIAMETER TO ELBOW. (SEE FIG.33)

GAS LOG LIGHTER MUST BE INSTALLED FLUSH TO THE HEARTH FLOOR OF YOUR APPLIANCE. DO NOT ELEVATE GAS LOG LIGHTER.

YOUR GAS LOG LIGHTER IS NOW READY FOR USE.

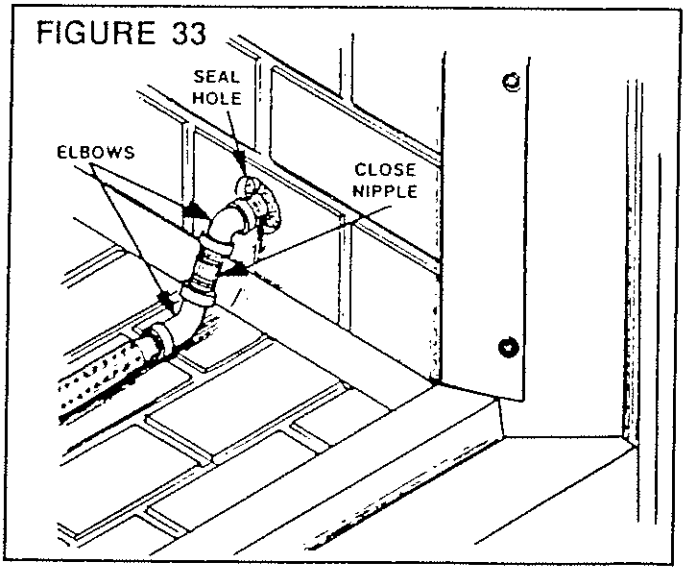


FIGURE 33

TEST FOR GAS LEAKS

All gas piping and connections must be tested for leaks after the installation is completed. Be sure gas valve is turned on. Apply soap suds solution to all connections and joints. If bubbles appear, leaks can be detected and corrected. DO NOT use a match or open flame of any kind to test for leaks. Never operate any appliance with leaky connections.

## CAUTION:

1) MAKE SURE THE DAMPER IN YOUR FIREPLACE IS SET IN A PERMANENTLY OPEN POSITION IN CASE THE GAS VALVE IS TURNED ON BY ACCIDENT. BY FOLLOWING THIS SIMPLE INSTRUCTION, YOU WILL PREVENT GAS FROM ESCAPING INTO YOUR LIVING ROOM AND CAUSING POSSIBLE SERIOUS INJURIES OR DAMAGE TO YOUR DWELLING.

2) TURN ON GAS VALVE.

3) LIGHT LOG LIGHTER WITH A MATCH. USE COMMON SENSE IN LIGHTING. FOR YOUR SAFETY, NEVER USE OR STORE GASOLINE OR OTHER FLAMMABLE LIQUIDS IN THIS OR ANY OTHER APPLIANCE.

4) AFTER YOUR LOG HAS STARTED TO BURN, TURN OFF GAS VALVE. THE KEY USED FOR TURNING THE GAS VALVE ON/OFF SHOULD BE KEPT OUT OF REACH OF CHILDREN.

5) TO RESTART, REPEAT RELIGHTING INSTRUCTIONS.

6) KEEP ORIFICES CLEAN FROM ASHES AND DEBRIS. THIS WILL PREVENT THE ORIFICES FROM BECOMING CLOGGED. CLEAN IT ONLY WHEN COLD.

NEVER ALLOW GAS TO RUN UNLIGHTED. IF THIS HAPPENS, THERE IS A POSSIBILITY OF GAS ESCAPING INTO YOUR LIVING AREA. IF YOU SMELL GAS, OPEN WINDOWS, EXTINGUISH ANY OPEN FLAME AND IMMEDIATELY CALL YOUR LOCAL GAS SUPPLIER. NEVER LEAVE CHILDREN ALONE NEAR THE APPLIANCE WHEN IN USE. REFER TO INSTRUCTION MANUAL FOR OTHER INSTRUCTION DETAILS.

KEEP THESE INSTRUCTIONS FOR FUTURE REFERENCE.

## COLD CLIMATE INSTALLATION

If you live in a cold climate, it is especially important to seal all cracks around fireplace with non-combustible material and wherever cold air could enter the room.

Surround material must be caulked where it meets the black metal facing of the fireplace to avoid cold air intrusion. Use only non-combustible caulking material on fireplace facing to seal.

In areas of extreme cold, it is recommended that the outer wall of the chase be insulated. This will reduce the possibility of cold air convection currents on the fireplace. NEVER use blown-in type of insulation as this could plug the holes at the base of the unit and interfere with the thermal syphoning action necessary to keep the chimney cool.

# III. FINISHING THE FIREPLACE

## FIREPLACE FACING

When selecting the finish material for your fireplace, it is important to remember the following: THE BLACK FACE OF THE FIREPLACE MUST NOT BE COVERED WITH ANY TYPE OF COMBUSTIBLE MATERIAL.

Non-combustible facing material such as tile, brick, glass, etc. may overlap the black face of the fireplace. Be sure to use non-combustible heat resistant mortar or adhesive when attaching to fireplace face. The face of the fireplace may be painted to match the room decor provided you use a heat resistant paint.

**NOTE: DECORATIVE FACING MUST NOT EXTEND INTO THE FIREPLACE OPENING AT ALL, BECAUSE IT WILL INTERFERE WITH THE OPERATION OF THE GLASS DOORS. THE GLASS DOOR MOUNTS OVER THE FACING MATERIAL. THE MOUNTING HARDWARE PROVIDED WILL ALLOW INSTALLATION TO FACING MATERIAL OF 0" TO 5" IN WIDTH.**

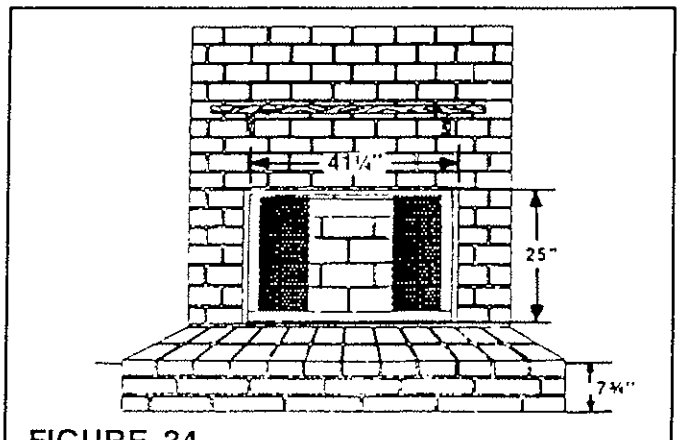



FIGURE 34

## HEARTH EXTENSION:

If there is a combustible floor construction in front of the fireplace, a hearth extension is required to protect it. The hearth extension, as shown in Figure 35, must be a minimum of 20" deep by 65" wide and extend a minimum of 12" beyond each side of the fireplace opening.

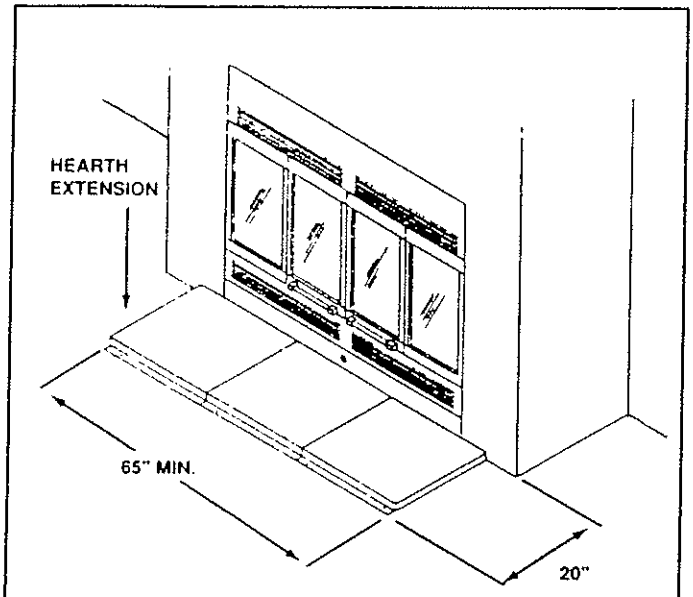



FIGURE 35

The hearth extension must be made from a non-combustible inorganic material with a thermal conductivity, K of .27 or less. The thermal conductivity, K or thermal resistance, R of materials can usually be obtained from the manufacturer. The factors are related by the formula $K = \frac{1}{R}$ The thickness required for various common materials and their factors are shown in Figure 36.

| Type of Insulation | K* | Minimum Thickness Required (in.) |
|---|---|---|
| Johns Manville CERAFORM 126 | .27 | 1.00 |
| U.S. Gypsum Corp. MICORE CV230 | .43 | 1.59 |
| Insulating Board (K-FAC 19) | .77 | 2.85 |
| Lydall, Inc. LYTHERM 1401 | .64 | 2.37 |
| Standard Oil DURABOARD LDandHD | .60 | 2.22 |

*Units of K are BTU/In, Hr, Sq. Ft, °F

FIGURE 36 — COMMON MATERIALS AND THEIR FACTORS

### EXAMPLE OF DETERMING HEARTH EXTENSION EQUIVALENT

To determine the thickness required for any material:

$$K \ \frac{\text{new material}}{.84} \times 1" = \text{Thickness Required}$$

Example for Insulating Board-K-FAC 19 (K from Figure 36).

$$\frac{.77}{.27} \times 1" = 2.85"$$

Whatever the material used, sufficient thickness must be laid down to maintain an equivalent K factor.

The thermal insulating layer may be covered by any non-combustible material such as metal, tile, slate, brick, glass, concrete, marble, or stone. When using a low density insulating material a supporting metal cover such as shown in Figure 37 should be fabricated and installed. NOTE: Some non-combustible coverings such as metal, slate, sandstone and marble are relatively good conductors of heat and must be used in combination with the more thermally resistant materials.

In finishing up the hearth extension, be sure to fasten it securely to the floor to prevent shifting, and seal the gap between the fireplace frame and the hearth extension with a non-combustible material (see Figures 38 & 39).

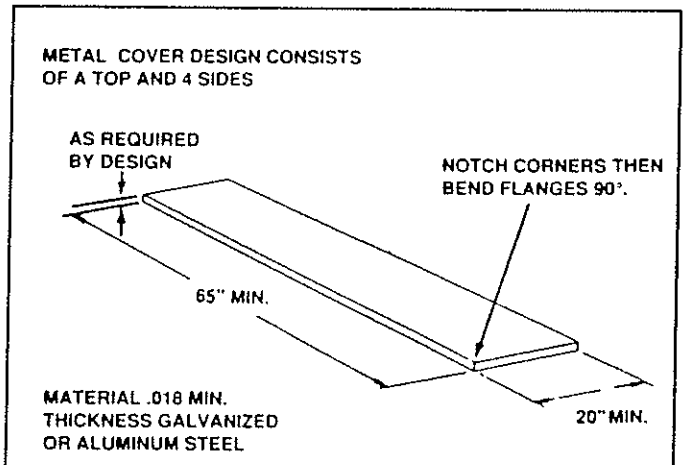



FIGURE 37— METAL COVER CONSTRUCTION

## NON-COMBUSTIBLE DECORATIVE COVERING:

Should be at least 3/8" thick and meet local building code requirements. The finished height of the hearth extension must not block the inlet grille at the bottom of the fireplace.

# IV. OPERATING INSTRUCTIONS

## DAMPER CONTROL LEVER

The damper control lever located inside the top front of the firebox has been engineered to provide safe operation of your fireplace. Do not close the damper in an attempt to reduce a large fire. To do so may cause a potential smoke hazard, just as any fuel-burning appliance would do if not properly exhausted. If you forget to open the damper before you start your fire (you will know immediately by the smoke entering your home,), simply move the damper lever from its closed position notch to the open position (Figure 42).

The fireplace flue damper must always remain open until the fire is totally out. Partially burned logs can appear to be out even when still burning and giving off dangerous gases. If the damper is closed too soon, these gases may escape into the room.

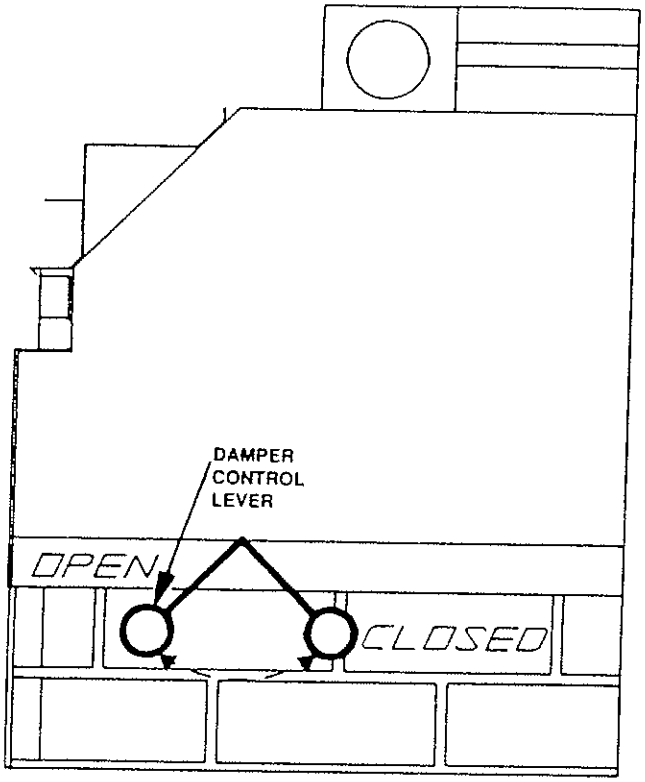



FIGURE 42

## FIREPLACE GRATE:

This unit has been equipped with a grate to keep the operation of your fireplace efficient and safe. **Do not attempt to defeat its purpose.** The size and position of the grate was engineered to give the ideal combustion characteristics for the fire. By keeping your logs within the grate and not on the hearth, you will prevent the chance of a log "spill" or roll out of the fireplace. **DO NOT OVERLOAD THE FIREPLACE.** Piling excessive wood on your grate will not increase efficiency and could possibly cause smoke to enter your room Keep the hearth area under the grate free of excessive ash build-up to allow a free flow of air for the fire.

## OUTSIDE AIR CONTROL

The outside combustion air kit is an optional accessory installed at the time of fireplace installation. It aids greatly in the efficient operation of your fireplace. It should be opened during operation as shown in Figure 43.

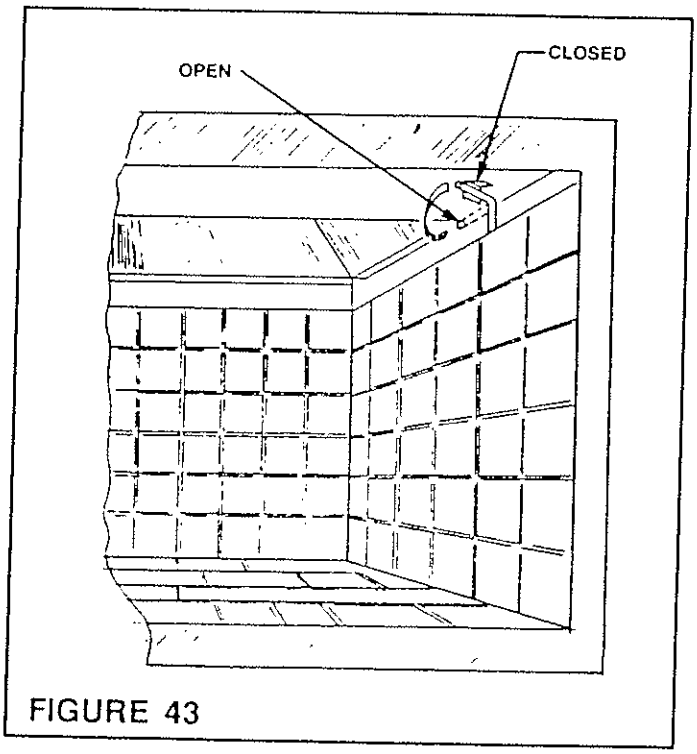



FIGURE 43

Outside air drawn into the fireplace supplies air to the fire for combustion. When the fireplace is not in use, close the air gate to prevent cold air from entering your home. For outside wall installation check the intake screen inside eyebrow periodically to insure it is clear of debris.

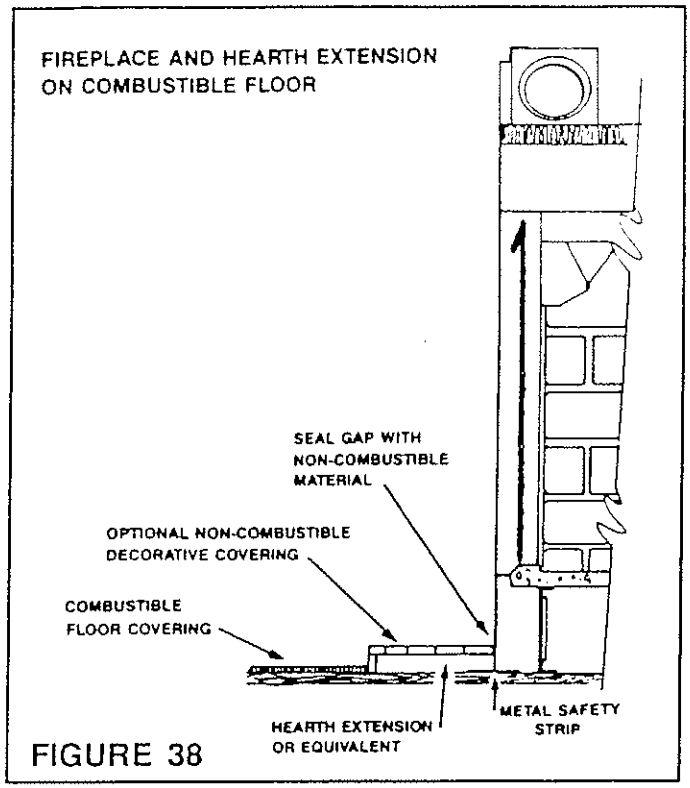



FIGURE 38

If a raised hearth is constructed, the hearth must be built out of completely noncombustible materials. The height of the raised hearth cannot extend above the bottom edge of the fireplace opening.

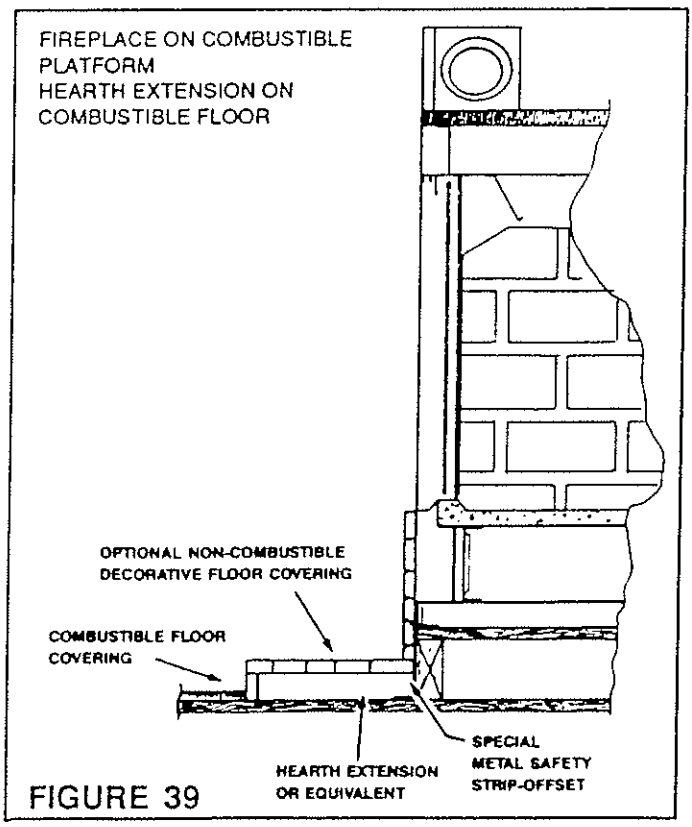



FIGURE 39

WARNING:
HEARTH EXTENSION IS TO BE INSTALLED ONLY AS ILLUSTRATED. FIGURES 35 THRU 39 SHOW OPTIONAL INSTALLATIONS.

# MANTLES

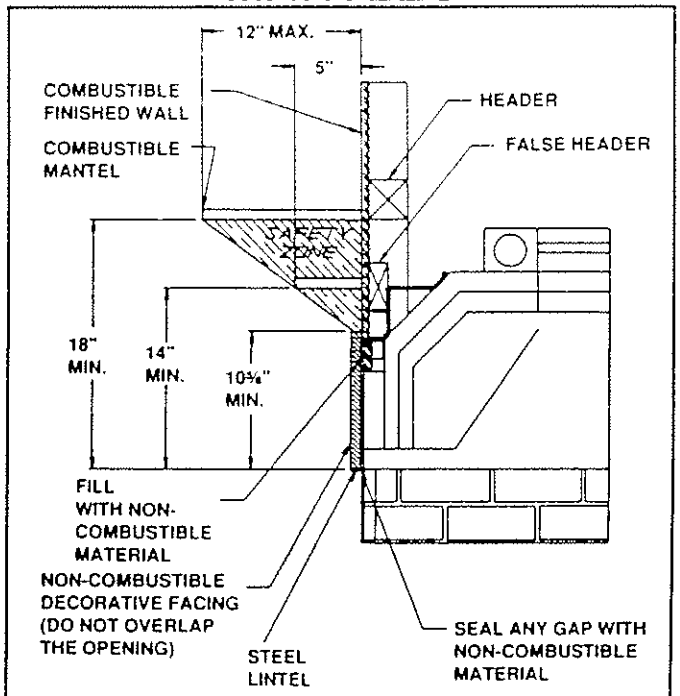



FIGURE 40—NON COMBUSTIBLE FACING

Combustible mantles may be safely installed provided they do not project beyond safety zone as illustrated in Figure 40.

NOTE: Use an "L" shaped piece of metal (lintel) across the top of the fireplace opening when a non-combustible material is used on the face of the fireplace. It can be attached to the face of the fireplace with screws (see Figure 40).

## MANTLE SURROUNDS

Often a decorative surround or vertical portion of the mantle is desired. If this is constructed of any combustible material it must be within the safe zone indicated in Figure 40.

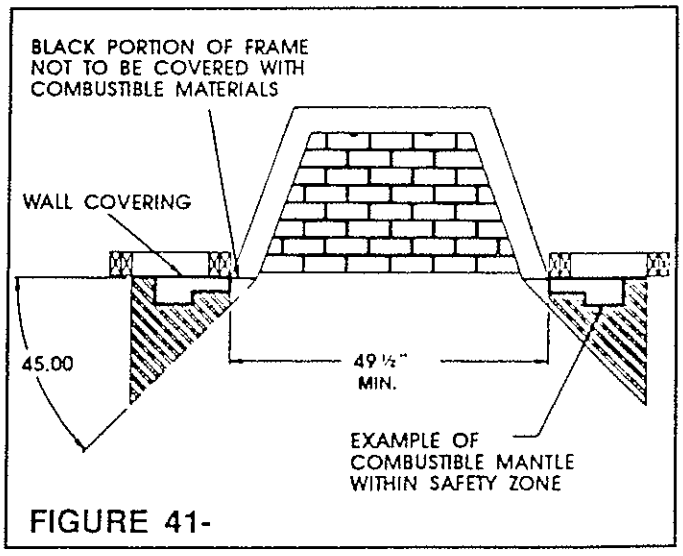



FIGURE 41-

If the fireplace design incorporates a mantle with side legs, book shelves, wood bins, closets, etc., these should not project beyond the safety zone shown in Figure 41.

Read operation and warranty manuals thoroughly before installing and using this fireplace.

# DO'S AND DON'TS

- This Fireplace is intended for use with solid wood fuel only.
- When installing this fireplace in cold climate areas be sure to follow the cold climate installation instructions outlined in this booklet.
- Check the hearth for cracks and damage. Because the firebrick refractory is repeatedly heated and cooled, this can cause hairline cracks to form. This is normal and does not damage the fireplace. If, however, a crack should become large (1/16" wide or larger), refractory should be replaced.
- Have repairs done by a qualified service technician.
- Open damper to ensure proper operation.
- Be sure outside air gate is open before starting your fire. Ventilating fans, central heating systems, and exhaust fans can cause fireplaces to smoke by stealing the available combustion air needed for burning the wood in your fireplace.
- "Cure" the refractory lining by building only small fires the first two or three times you use the fireplace. The refractory sides and bottom are made from a combination of materials including refractory cement and water. Large roaring fires built on "uncured" refractory could generate steam within the refractory and cause cracks.
- Keep area in front of fireplace clear of combustible materials such as drapes, paper products, wood storage, furniture, etc.
- Creosote— Formation and Need for Removal.

  When wood is burned slowly, it produces tar and other organic vapors, which combine with expelled moisture to form creosote. The creosote vapors condense in the relatively cool chimney flue of a slow-burning fire. As a result, creosote residue accumulates on the flue lining. When ignited this creosote makes it an extremely hot fire.

  The chimney should be inspected at least twice a year during the heating season to determine if a creosote buildup has occured.

  If creosote has accumulated it should be removed to reduce the risk of a chimney fire.
- To prevent excessive creosote build-up, use only dry, seasoned wood.
- Regular inspection and cleaning of the creosote (soot) build-up in your chimney is important for the safe operation of your fireplace. Consult your warranty manual for cleaning instructions.
- When fire is actively burning, open door for maximum heat
- Keep base of fireplace clean of excess ash accumulation to prevent grate "burnout".
- Keep the fire screen closed at all times when burning, except when adding fuel.
- WARNING: THE OPENINGS OF THE COLLAR AROUND THE BASE OF THE CHIMNEY AT THE TOP OF THE FIREPLACE MUST NOT BE OBSTRUCTED, NEVER USE BLOWN INSULATION TO FILL THE CHIMNEY ENCLOSURE.
- Do not overload the grate; to do so could cause smoke to enter the room.
- Do not allow ashes directly under the burning logs to build up to a point where they hinder the air flow.
- Do not block bottom vent or louvre.
- Do not burn large amounts of waste paper or cardboard in your fireplace.
- Do not burn wood products with synthetic binders like artifical logs or plywood, as these produce abnormally high temperatures.
- Never use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to start or "freshen up" a fire in this fireplace. Keep all such liquids well away from the fireplace while it is in use.
- Never close the damper until you are certain that there are no warm embers.
- DISPOSAL OF ASHES: Ashes should be placed in a metal container with a tight-fitting lid. The closed container of ashes should be placed on a noncombustible floor or on the ground, well away from all combustible materials, pending final disposal. If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled.

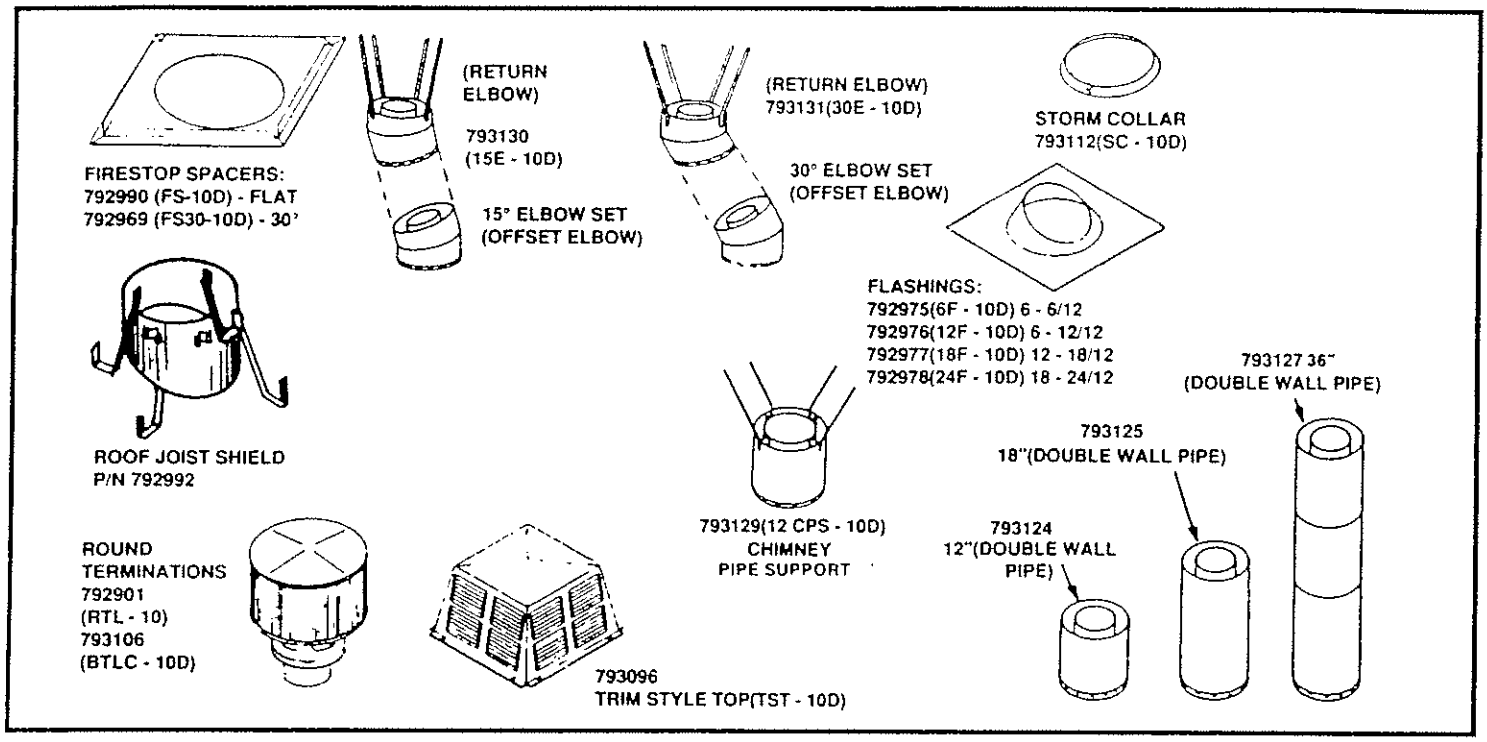
## REFERENCE DOCUMENTS:

1. MARCO Woodburning Fireplace Warranty and Operation Manual, P/N 181536.
2. Glass Door Kit Installation Instructions.
3. 10" Classic Adjustable Round Terminations Installation Instructions P/N 181690.
4. 10" Trim Style Termination, P/N 181689.

THIS FIREPLACE IS NOT INTENDED TO BE USED WITH ANY COMPONENTS OTHER THAN THOSE SPECIFIED IN THIS MANUAL

# COMPONENT PARTS

U.L. LISTED PARTS FOR 10" DOUBLE WALL FLUE SYSTEM




# REPLACEMENT PARTS

| TRADITIONAL - 792870 | Part Number |
|---|---|
| Grate | 498728 |
| Refractory: | |
| Hearth | 164610 |
| Back | 164611 |
| Side | 164612 |
| Screen | 161110 |

| TUDOR - 792871 | Part Number |
|---|---|
| Grate | 499340 |
| Refractory: | |
| Hearth | 164617 |
| Back | 164620 |
| Side LH | 164618 |
| Side RH | 164619 |
| Screen | 161110 |

| CUSTOM - 792872 | Part Number |
|---|---|
| Grate | 499341 |
| Refractory: | |
| Hearth | 164613 |
| Back | 164614 |
| Side LH | 164615 |
| Side RH | 164616 |
| Screen | 161110 |

| Custom Glass Door Kit | |
|---|---|
| Square Framed Glass Door | 793420 |
| Left Hand Door | 499231 |
| Right Hand Door | 499232 |

## HOW TO ORDER REPAIR PARTS

1. Order repair parts from the Dealer through whom you purchased the fireplace, if possible.
2. Be sure to give the Part Number, the Name of the Part, and the Fireplace Stock Number. The Stock Number is printed on the UL Rating Plate, located in the upper right hand corner behind the screen.
3. When remittance is sent with the order, include enough for transportation.
4. There is a minimum invoice charge of $10.00 plus postage for each order.
5. All parts are subject to change without notice.